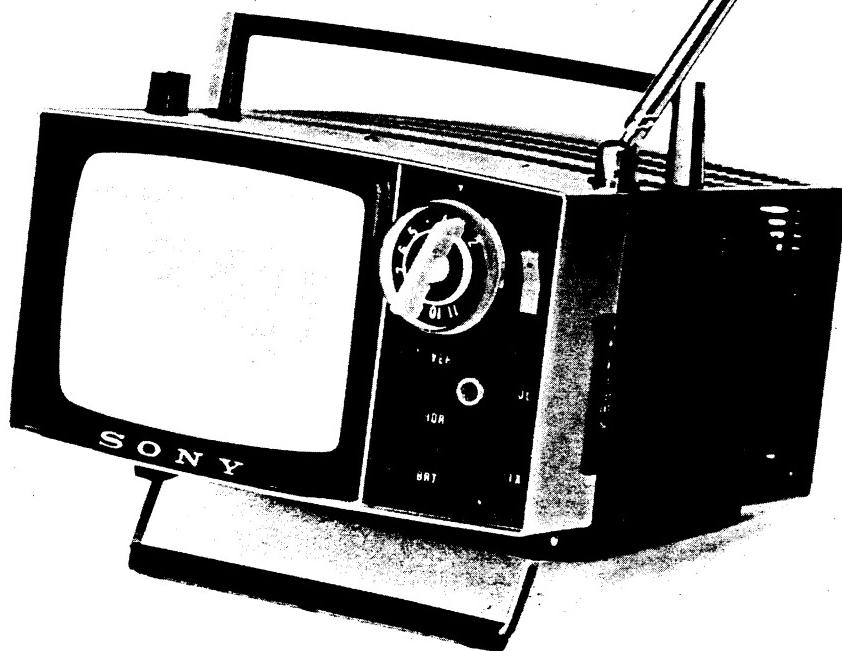


TV5-303M

3270



Specifications

Picture Tube : 5", 70° Deflection, Aluminized Screen

Transistor : 30 (6 Silicon-including 3 Epitaxial, 24 Germanium)

Diode : 22 (including 4 Selenium Rectifier)

Channel Coverage : CCIR Western VHF Channels E-2 to E-11

French VHF Channels 6, 8, 8A, 12

7, 9, 11 (correspond to E-5, E-7, E-9)

Belgian VHF Channels E-2 to E-11 (For UHF reception, connect SONY UHF Converter, VUC-SE.)

IF Circuit : 4 Stages with 5 stagger tuned elements

Video Bandwidth : 3 Mc/-3 dB

Intercarrier System

CCIR

Video IF (AM)

Sound IF (FM)

21.25 Mc

Separate-Carrier System

French VHF

Video IF (AM)

Sound IF (AM)

French UHF

26.75 Mc

15.6 Mc

Belgian (625 lines)

26.75 Mc

20.25 Mc

Belgian (819 lines)

26.75 Mc

21.25 Mc

Belgian (819 lines)

26.75 Mc

21.25 Mc

Resolution : Vertical 400 lines, Horizontal 300 lines

Sound System : 5.5 Mc Intercarrier and Separate Systems (Can be selected by push button provided in the set.)

Power Output stage ; OTL system, 150 mW

Speaker ; 3" 70Ω Voice Coil

Automatic Control : Puls-operated AGC, Diode AFC, Sync. ANS (Automatic Noise Suppressor)

Power Requirement : AC 220 V, 50 or 60 c/s, 12 V Battery (3.5 AH)

Power Consumption : AC 13 W, DC 9.6 W (0.8 A)

Dimensions : 4-1/4" (H) × 7-5/8" (W) × 7-7/8" (D)

Weight : 8.0 lbs.

Glare Proofing : Smoked Filter, 70% Transparency

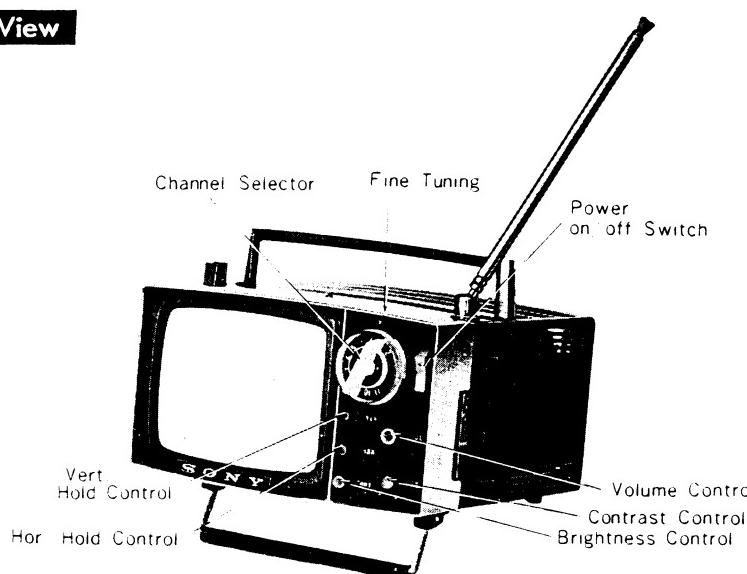
SONY®
SERVICING GUIDE

3270

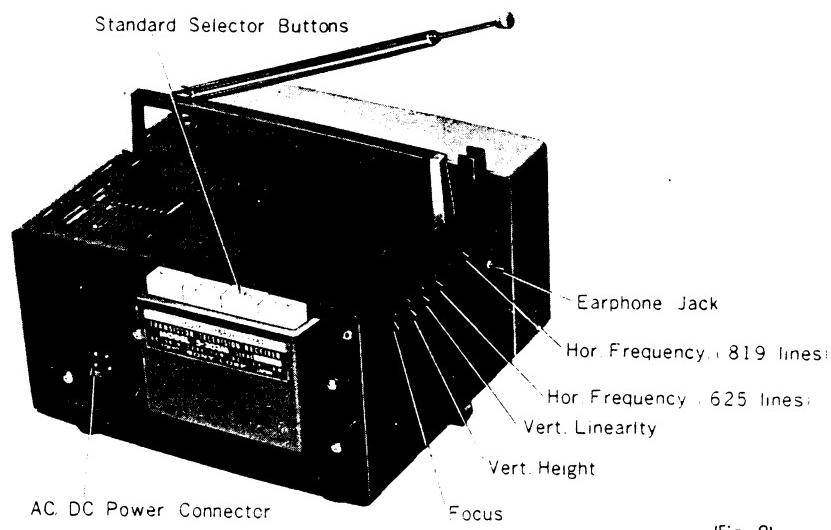
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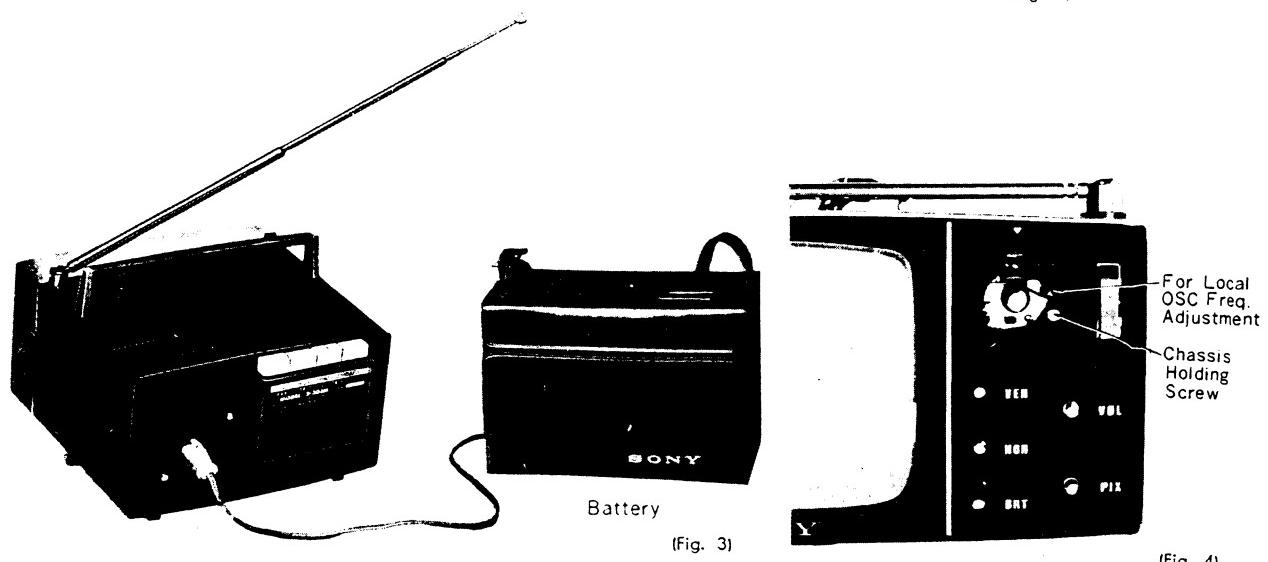
External View



(Fig. 1)



(Fig. 2)



(Fig. 3)

(Fig. 4)

THE SONY MICRO-TV MODEL 5-303M

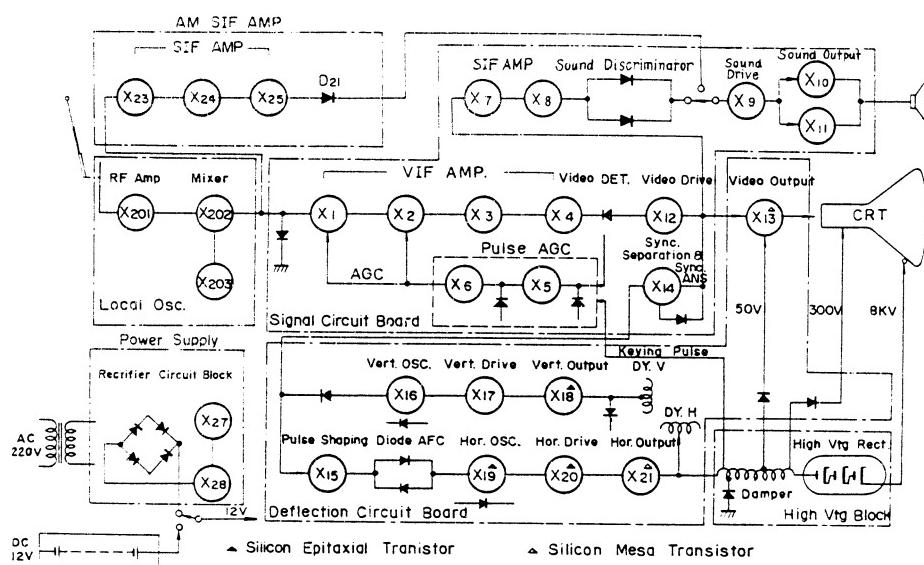
General

The aim in the designing of the SONY Micro-TV Model 5-303M was the creation of a completely new type of TV set which could be achieved only by the use of transistors.

The concrete requirements given to be met from the start of the design were as follows:

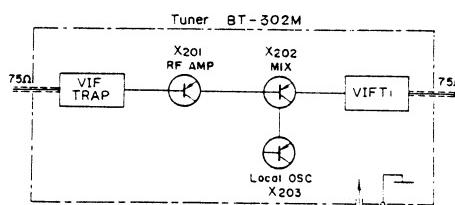
- 1) To be small in size and light in weight.
- 2) To have the lowest power consumption of any mass produced TV set.
- 3) To operate perfectly as a completely portable TV set under all conditions.
- 4) To provide facilities for easy servicing.

Block Diagram

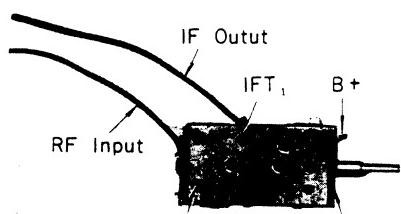


(Fig. 5)

Block Diagram of Tuner

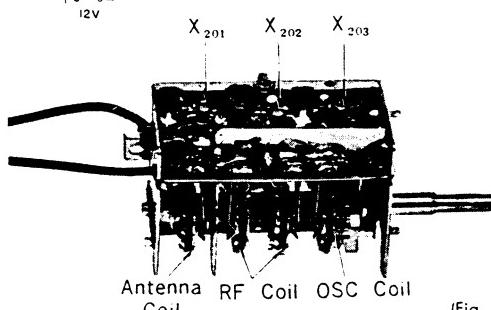


(Fig. 6)



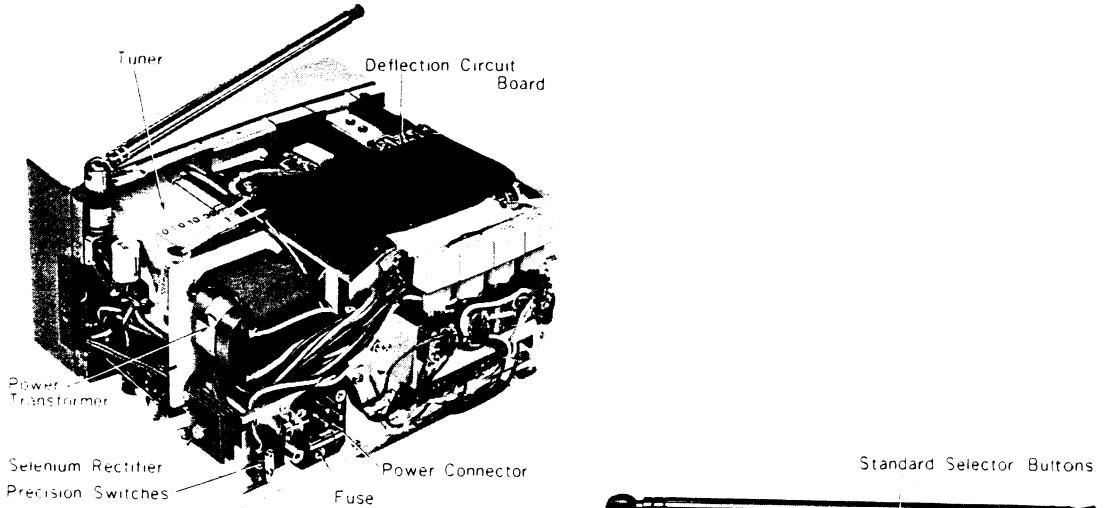
VIF Trap For Local OSC Adjustment

(Fig. 7)

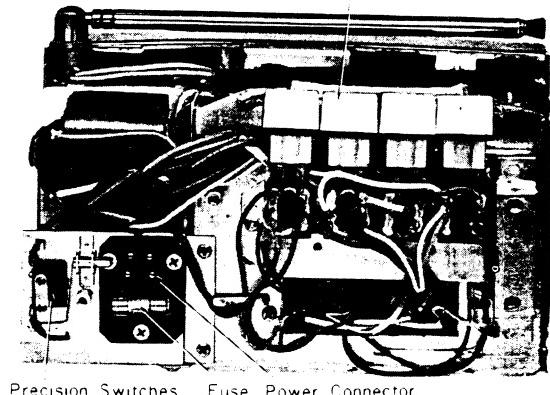


(Fig. 8)

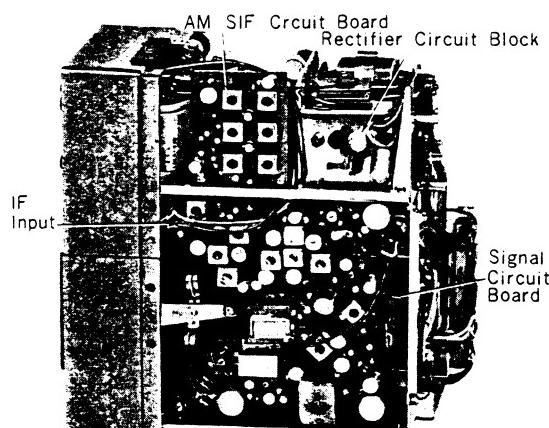
Electronic Parts Location



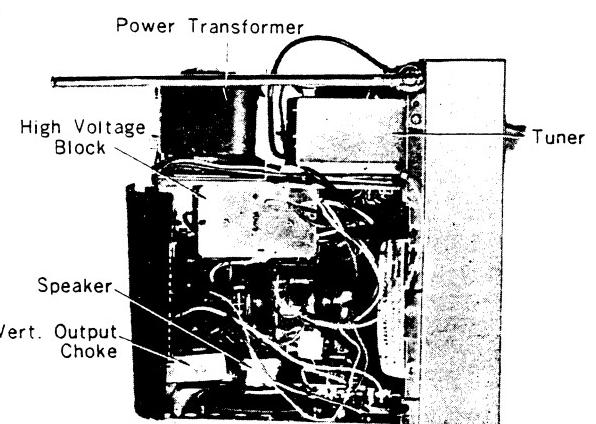
(Fig. 9)



(Fig. 10)



(Fig. 11)



(Fig. 12)

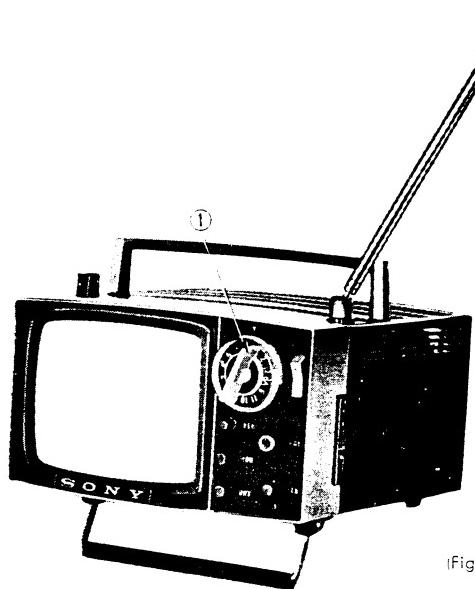
Method of Disassembling the Set

To Remove the Front Control Panel

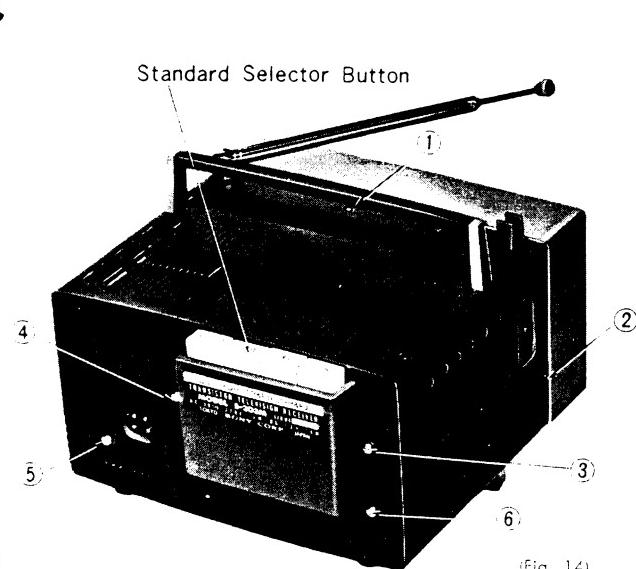
1. Pull all Control Knobs straight out. The Fine Tuning Knob may be somewhat difficult to remove—use force.
2. Remove the two small Screws on the Front Control Panel. The Front Control Panel can now be removed (Fig. 13).

To Remove the Back Cabinet Cover

1. Press the four Standard Selector Buttons at the same time and lock them. (Fig. 14)
2. Remove Screws ① (located on the top) and ② (located on the left side). Remove Screws ③, ④, ⑤ and ⑥ on the back. The Back Cover can now be removed by pulling straight back. (Fig. 14)



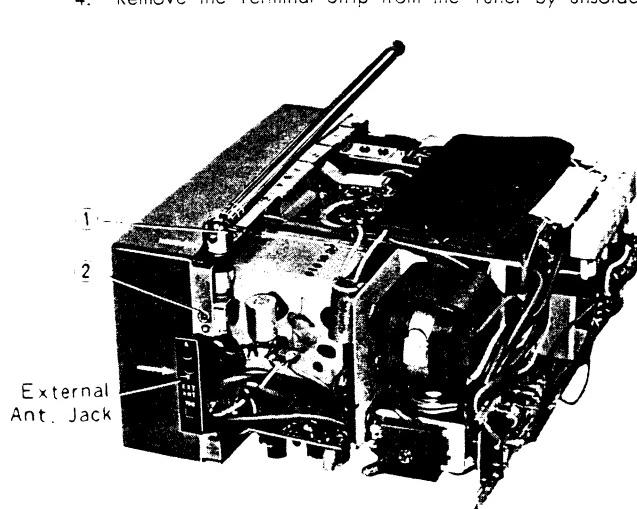
(Fig. 13)



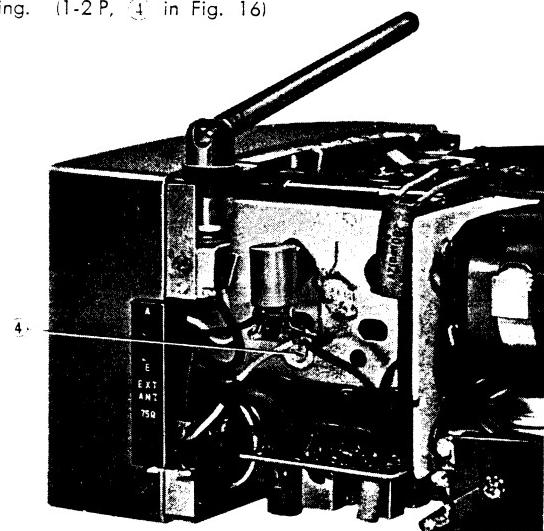
(Fig. 14)

To Remove the Telescopic Antenna and the Tuner

1. Pull off the Pin Connectors of the Tuner IF Lead Wire and the shielded Ground Wire from the Terminals on the Signal Circuit Board as shown in Fig. 15.
2. Remove Screws ① and ② (Fig. 15).
3. Push the Telescopic Antenna and the External Antenna Connectors in the direction shown by the arrows in Fig. 15. The Telescopic Antenna and the Connectors can now be detached.
4. Remove the Terminal Strip from the Tuner by unsoldering. (1-2 P, ④ in Fig. 16)

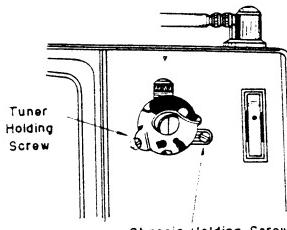


(Fig. 15)

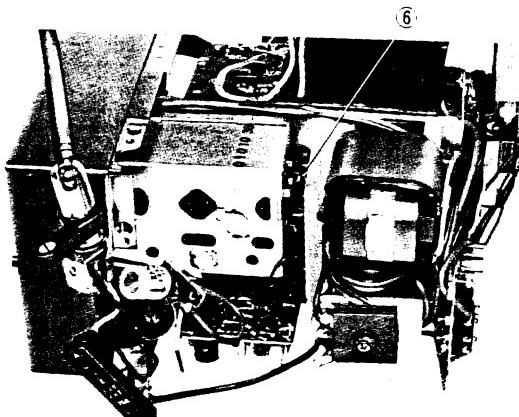


(Fig. 16)

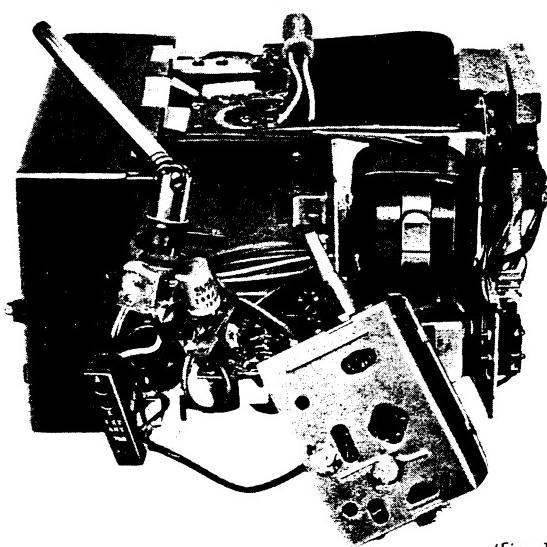
- The Tuner can be detached by removing two Screws on the front located near the Tuning Control Shaft. One Screw is on the Front Panel and the others inside on the Tuner as shown in Fig. 17.
- The Tuner, Telescopic Antenna and Antenna Connectors can be removed from the set by unsoldering the Red Wire to the front of the Tuner, the Black Wire to the Chassis and the Yellow Wire with the Resistor to the Antenna Jack. The IF Lead Wire to the Tuner with the Pin Connectors can be pulled through from the back of the Picture Tube. (Fig. 32~33)



(Fig. 17)



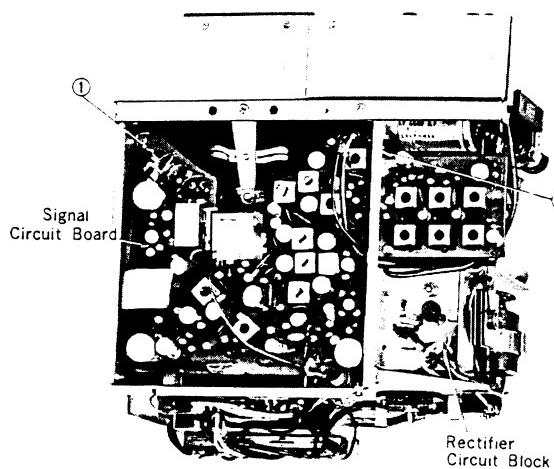
(Fig. 19)



(Fig. 19)

To Remove the Signal Circuit Board

- Remove the Screws (①, ② in Fig. 20).
- Pull out the Connectors (①, ② in Fig. 21).
- Unsolder the Blue Lead at the Relay Terminal coming from the "CCIR" Selector Switch (③ in Fig. 21).
- The Signal Circuit Board can be removed as a unit by pulling directly from the Multi-Jack.



(Fig. 20)

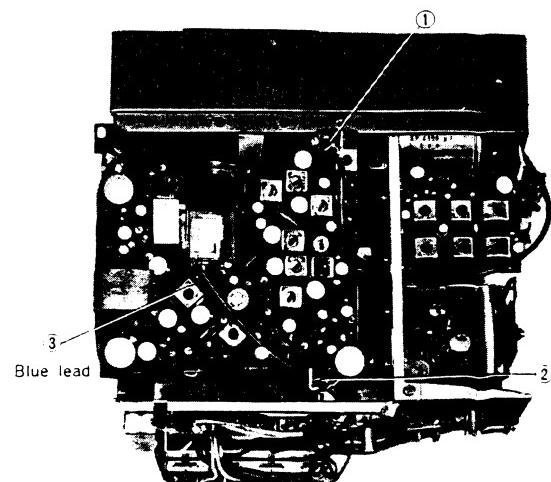
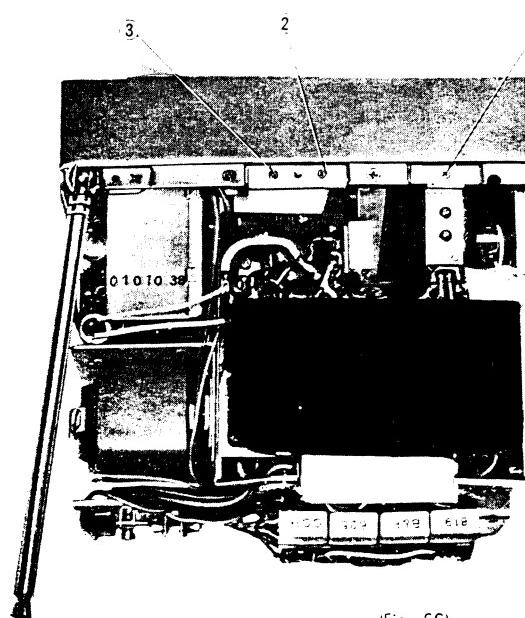


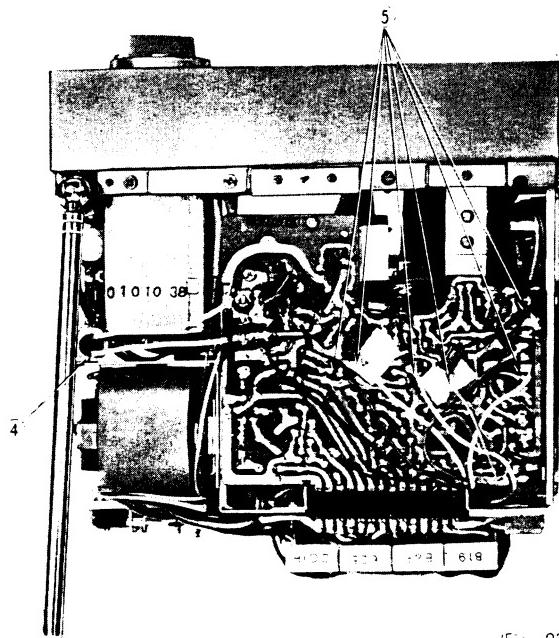
Fig. 21

To Remove the Deflection Circuit Board

1. Remove Screws ①, ② and ③. (Fig. 22)
2. Remove the Electrolytic Capacitor "C810" from the Power Supply by pulling the body (④) in Fig. 23)
3. Unsolder the six leads (⑤) in Fig. 23, Yellow, Orange, Green, Gray, Violet and White.
4. Pull out the connectors shown in Fig. 24 and Fig. 25.



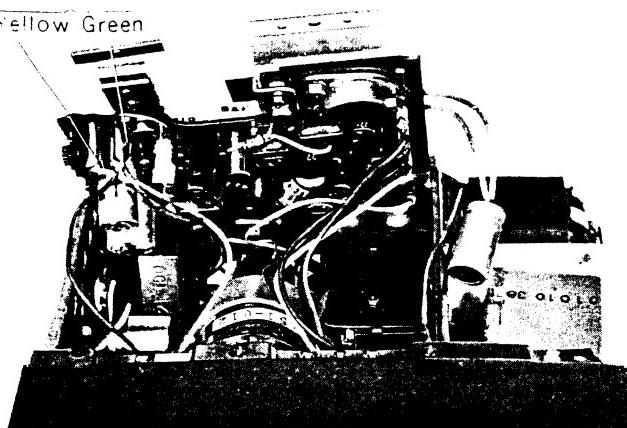
(Fig. 22)



(Fig. 23)

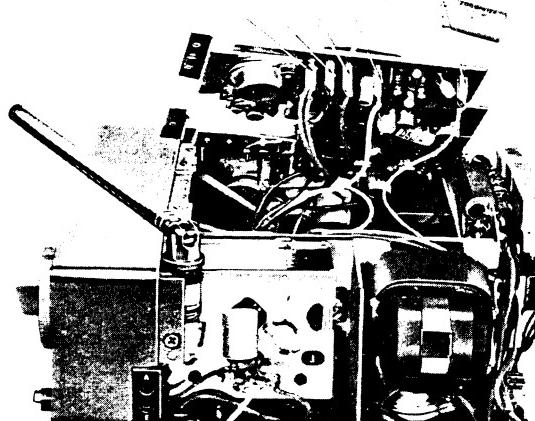
To Deflection

Yellow Green



(Fig. 24)

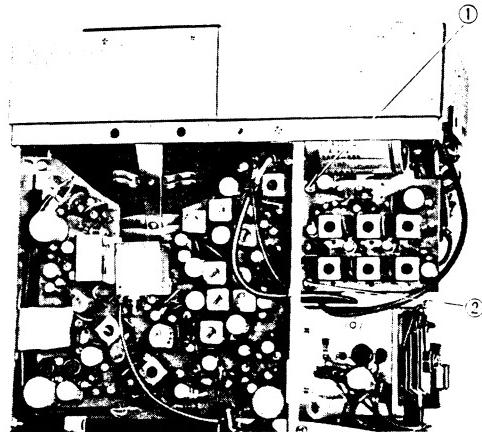
Yellow
To Picture Tube
Red Black Blue White



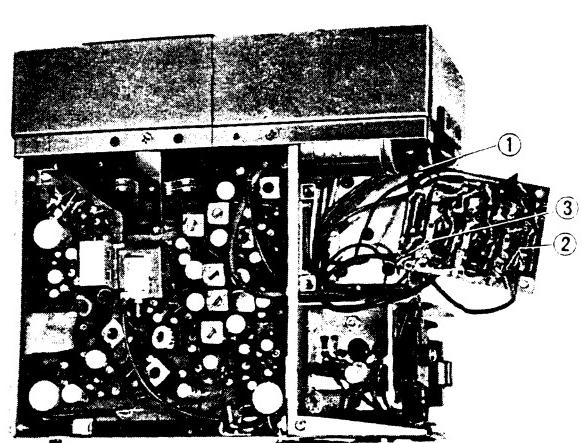
(Fig. 25)

To Remove the AM SIF Circuit Board

1. Remove the two Screws (① and ② in Fig. 26)
2. Unsolder the Blue lead (+B lead), the Black Coaxial Cable (Input lead) and the Black Shielded lead (Output lead) (① in Fig. 27).



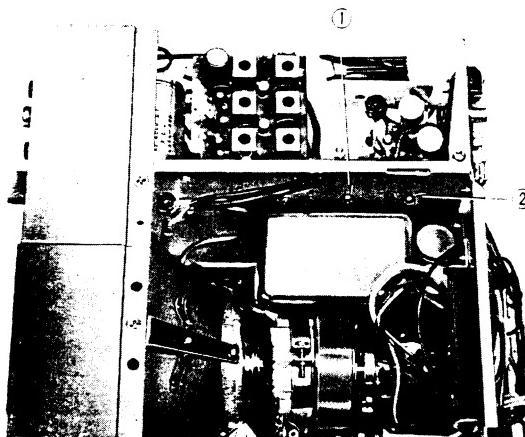
(Fig. 26)



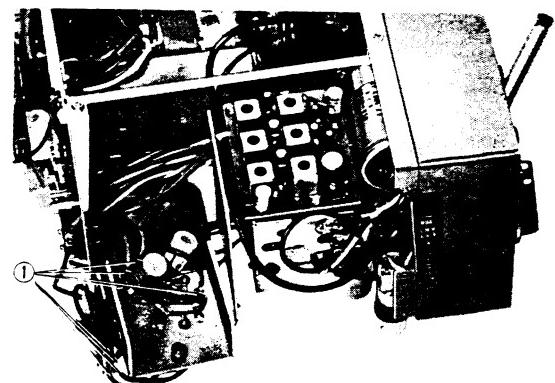
(Fig. 27)

To Remove the Rectifier Circuit Board

1. Remove the two Screws, (① and ② in Fig. 28)
2. Unsolder the eight leads, (① in Fig. 29)



(Fig. 28)



(Fig. 29)

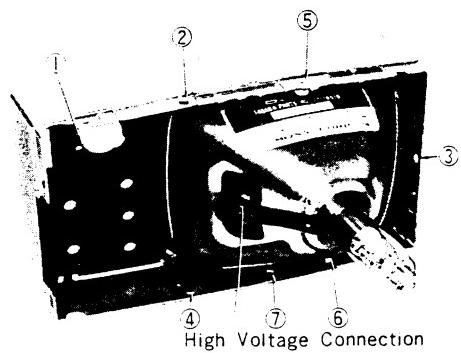
To Remove the Chassis from the Front Panel

Remove Screws ②, ③ and ④. Remove the Screw ① from the front side after pulling off the Channel Selector Knob and the Fine Tuning Knob (Refer to Fig. 4 on page 3.)

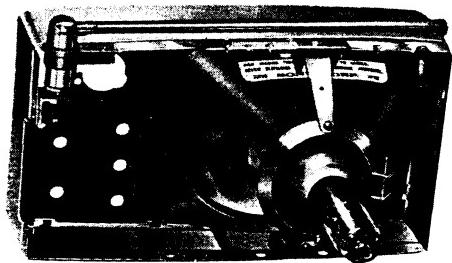
Unsolder the Red, the Blue and the Black Wires from the Pin Connectors. These wires go to the Picture Tube Yoke. Also unsolder the Green Wire from the Choke Coil located just below the Speaker. Pull off the High Voltage Anode Connector from the side of the Picture Tube. This is a Snap Fastener but use caution in removing it. Pull off the Socket of the Picture Tube straight back.

To Remove the Picture Tube

Remove the Screw and Nuts ⑤, ⑥ and ⑦ shown in Fig. 30) and lift up the Picture Tube.



(Fig. 30)

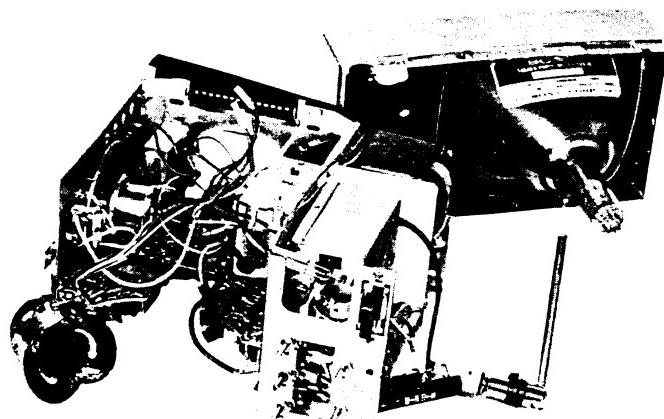


(Fig. 31)

To Remove the High Voltage Block

1. Unsolder three lead wires (Red, Blue and Black).
2. Pull off the Anode Cap.
3. Pull off the Pulse Supplying Pin Connectors coming from the Signal Circuit Board.
4. Remove the Phillips Screw.

NOTE: It is not recommended that the High Voltage Block is disassembled because a special Insulating Material is used inside to coat all High Voltage Points.



(Fig. 32)

Adjustment and Alignment

SIGNAL CIRCUIT ADJUSTMENT

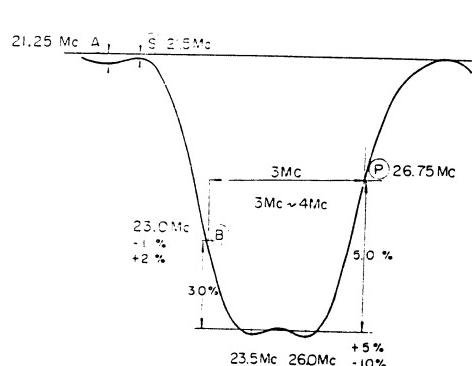
A. VIF Adjustment

1. Disconnect the Keying Pulse Output Cable (shown by arrow ② in Fig. 20).
2. Connect an Electrolytic Capacitor (500 mfd/120 V) across R316 (10 KΩ).
3. Connect a potentiometer (60 KΩ) between +12 V line and base of X6 (2SC73).
4. Connect a Voltmeter across C-R301 (1.2 KΩ).
5. Adjust the potentiometer to obtain 1.2 V reading on the Voltmeter.
6. Connect the Tuner Output Cable to VIF input pin as shown. (① in Fig. 20)
7. Connect a Sweep Generator and a Marker Generator to the Test Point (T. P.) of the Tuner through a 2 mm fd capacitor.
8. Connect an Oscilloscope across R322.

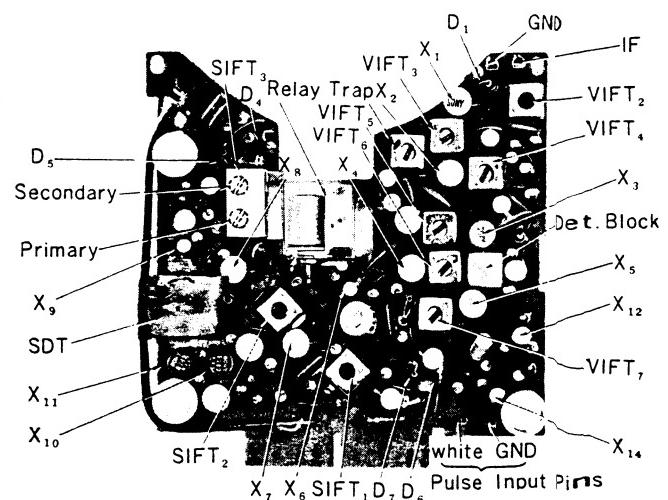
| Step No. | Marker Gen. Frequency | Adjust | Correct Marker position on the response curve | Remarks |
|----------|-----------------------|--|---|--|
| 1. | | VIFT ₇ | | |
| 2. | 21.5 Mc | Trap | Ⓐ (dip) | Set the slug around mid-point of the adjustable range. |
| 3. | 26.75 Mc | VIFT ₄ | Ⓑ (50%) | |
| 4. | 23.0 Mc | VIFT ₃ | Ⓑ (30%) | |
| 5. | | VIFT ₂ (height) | | |
| 6. | | VIFT ₁ (Shape of the curve around summit) | | For "normal response curve with maximum height. |
| 7. | | VIFT ₆ (same) | | |

* Normal Response Curve is shown in Fig. 33. The difference in level between Ⓑ and Ⓒ on the curve must be within the range between 16 dB and 26 dB. For convenient checking, it is recommended to measure the height at 21.25 Mc, Ⓓ, when the height of the response curve is 5 cm. During the alignment procedure, always keep the 5 cm height (corresponding 1 Vpp output) by adjusting output level of the Sweep Generator. If the height Ⓓ is approximately from 1 mm to 2 mm, the difference in level between Ⓑ and Ⓒ is considered approximately as 20 dB.

IF Response Curve



(Fig. 33)



(Fig. 34)

NOTE: If a proper response curve is not obtained by the adjustment procedures described above, change the values of damping resistors (R304, R306) on the Signal Circuit Board for optimum result.

After adjustment, check AGC operation as follows.

- 1) Disconnect the potentiometer (60 KΩ) between the +12 V line and base of X6 (2SC73).

The response curve will become much higher.

- 2) Connect the Keying Pulse Input Cord and feed -8 V DC.

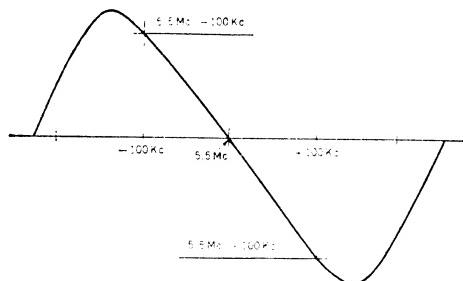
The response curve will be restored to normal by means of AGC effect.

B. FM SIF Adjustment

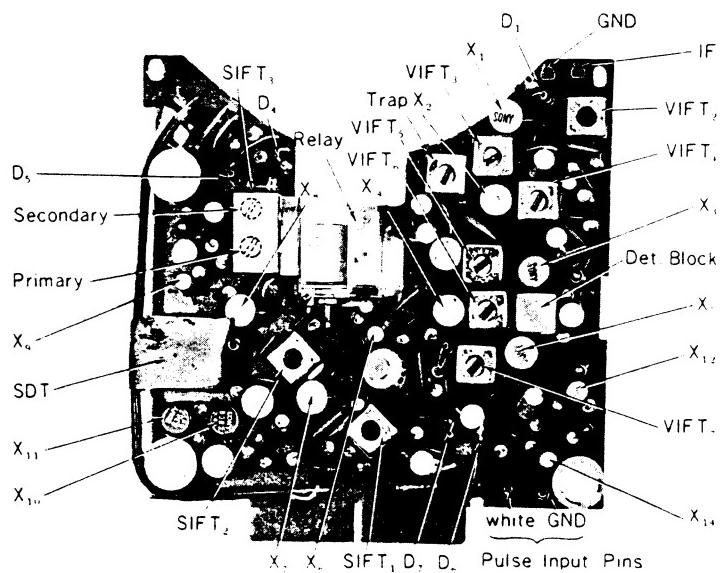
1. Set the Brightness Control to the optimum and the Contrast Control to the maximum positions.
2. Remove the Tuner Output leads.

| Step No. | Equipment | Connection | Freq. | Adjust | Result |
|----------|--|--|------------|---|--|
| 1. | Test Oscillator | VIDEO DET OUT | 5.5 Mc | SIFT ₁ | For minimum 5.5 Mc stripes on the Picture. |
| 2. | Same Voltmeter | Same Between junction of R ₂₁₄ and C ₄₁₄ , and ground | 5.5 Mc | SIFT ₂ Pry. cf SIFT ₃ (pink) | For maximum reading on the Voltmeter. |
| 3. | Sweep Gen. Standard Signal Gen. Oscilloscope | VIDEO DET OUT Same Across C ₄₁₄ | 5.5 Mc(AM) | Sec. cf SIFT ₃ (blue) | For minimum modulated wave. |

Standard S Curve



(Fig. 35)



(Fig. 36)

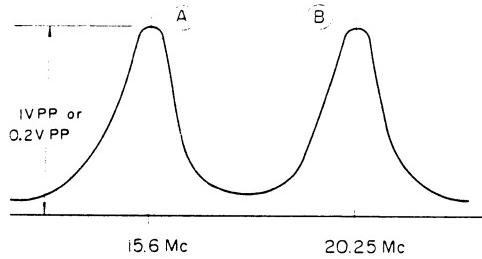
- NOTE:**
1. Repeat the above procedures two or three times.
 2. If S curve is not symmetrical with respect to the intersection of the S curve and the return line, adjust primary winding of SIFT3 for optimum result.

C. AM SIF Adjustment

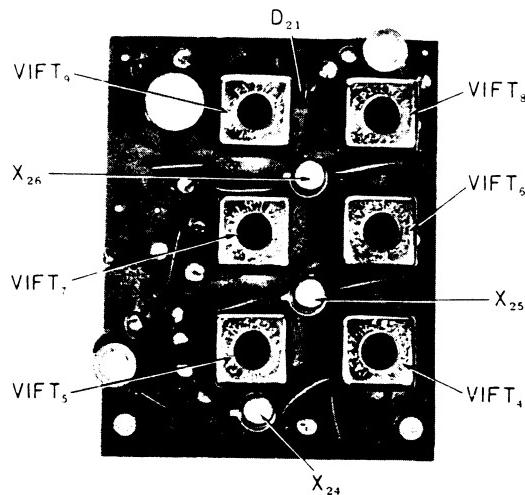
1. Disconnect the Tuner Output Cable (②) in Fig. 27) and the SIF Output lead (①) in Fig. 27).
2. Connect a Sweep Generator and a Marker Generator to the SIF input (②) in Fig. 27).
3. Connect an Oscilloscope in parallel with a $5.1\text{ k}\Omega$ resistor between the SIF Detector out terminal and ground.

| Step No. | Peak Value of the Response Curve | Marker Gen. Freq. | Adjust | Result |
|----------|----------------------------------|-------------------------|--|--|
| 1. | 1 Vpp | 15.6 Mc and 20.25 Mc | SIFT ₃ SIFT ₉ | To position the markers on the relative peak points of the response curve. (Ⓐ & Ⓑ) |
| 2. | 0.2 Vpp | same | SIFT ₄ SIFT ₅ SIFT ₆ SIFT ₇ | To obtain an optimum response curve. (Fig. 37) |
| 3. | 1 Vpp | same | | Check that the response curve is normal. If not, repeat the Steps, 1 and 2. |

AM SIF Standard Response Curve



(Fig. 37)



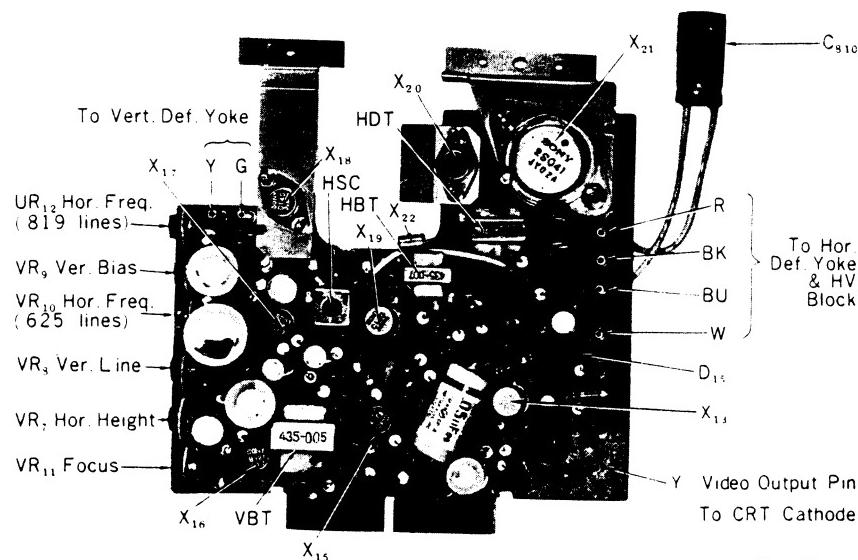
(Fig. 38)

D. SYNC and DEFLECTION CIRCUIT ADJUSTMENT

Set the receiver to CCIR (625) standard.

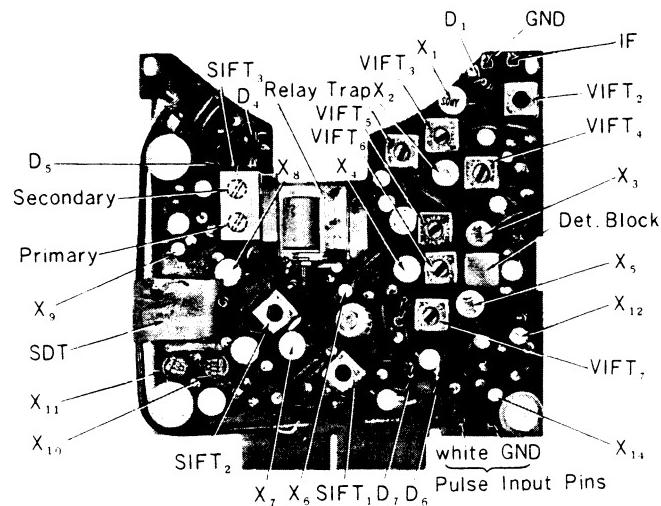
| Step No. | Adjustment for | Preparation | Equipment | Connection | Adjust | Result |
|----------|--|--|--------------|---------------------------------------|--|---|
| 1. | 50 V line | Lock in Sync. | Voltmeter | ⊕ side of C ₅₀₈ and ground | R ₅₀₈ (8 k~20 kΩ) | For approx. 50 V reading. |
| 2. | I _c of X ₁₃ (VID OUT) | Set to free Channel. Check 12 V and 50 V power supplies. | same | Across R ₅₀₈ | R ₅₀₈ (4.3 k~18 kΩ) | For approx. 17 V reading. |
| 3. | I _c of X ₁₈ (Vert. OUT) | Lock in Sync. Check 12 V power supply. | same | Across R ₇₁₃ | VR ₉ (Vert. Bias) | For approx. 0.33 V reading. |
| 4. | Vert. Height and Linearity | Receive a Test Pattern. Check 12 V power supply. | | | VR ₇ (Vert. Linearity) VR ₈ (Vert. Height) | For optimum Vertical Height and Linearity on the pattern. |
| 5. | Pulse Width | Lock in Sync. Short out HSC. | Oscilloscope | Emitter of X ₁₉ | C ₉₁₄ (0~0.03 μF) | For 10~13 μ sec. |
| 6. | HSC (Horizontal Stability Coil) | Lock in Sync. Receive a Test Pattern. | | | HSC | So that the picture is stable in either case where HSC is shorted or normal. |
| 7. | I _c of X ₂₀ (Hor. Drive) | | Ammeter | Across R ₅₀₆ | R ₅₀₆ (2~15 Ω) | For 100 mA reading on the Ammeter. |
| 8. | Horizontal Frequency | Set the Contrast and Brightness Controls to optimum positions. Receive a Test Pattern. | | | VR ₁₀ (Hor. Freq. 625) VR ₁₂ (Hor. Freq. 819) | To obtain same number of diagonal bars when setting VR ₄ to extremely clockwise and counter-clockwise positions. |
| 9. | Focus | Same | | | VR ₁₁ (FOCUS) | For optimum focus. |
| | | Lock in Sync. | | | | |

NOTE: As the steps, 5 and 6, have influence on each other, the adjustments must be repeated two or three times.

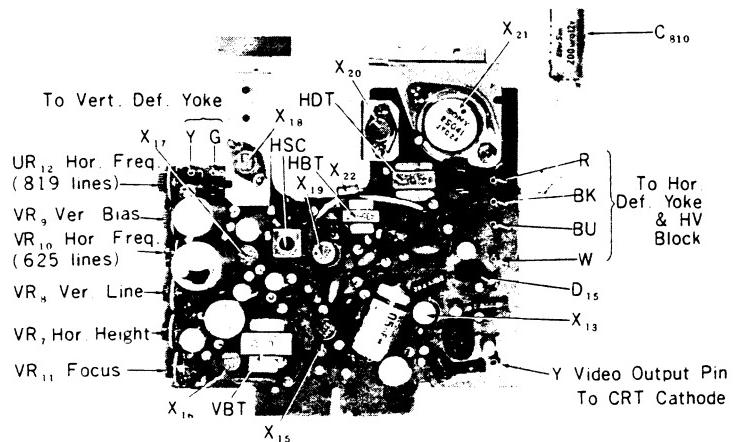


(Fig. 39)

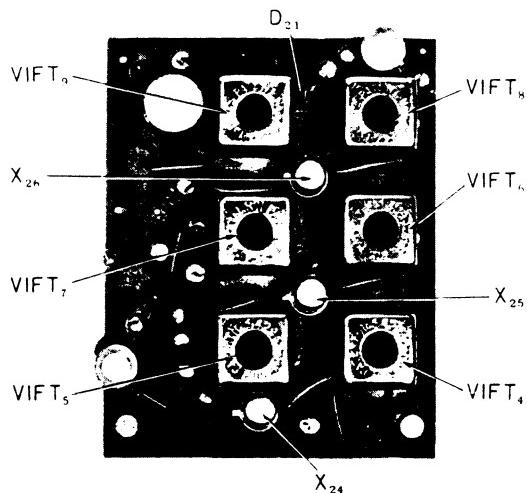
Electronic Information of Each Section



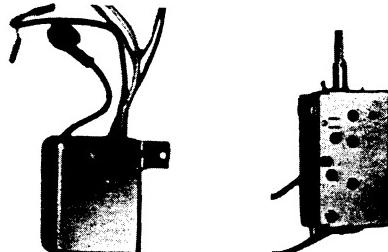
(Fig. 40)



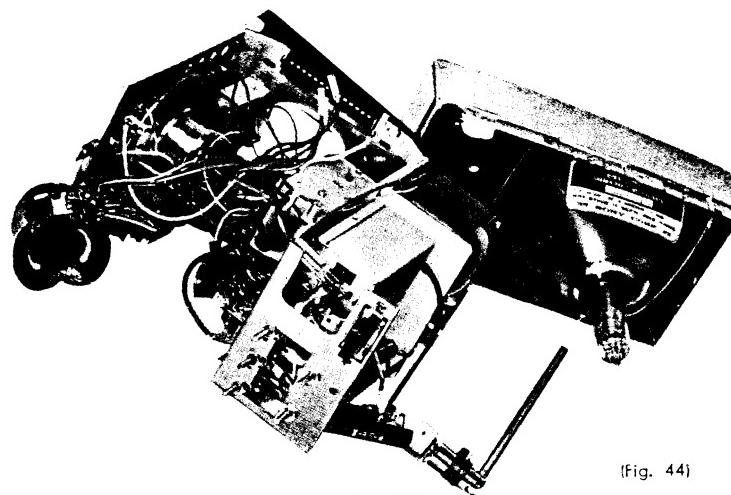
(Fig. 41)



(Fig. 42)



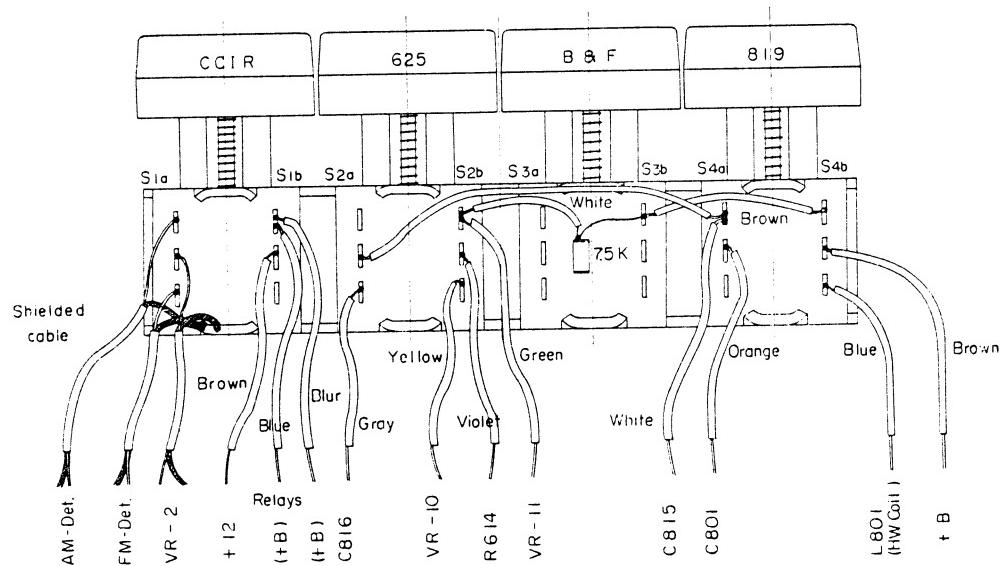
(Fig. 43)



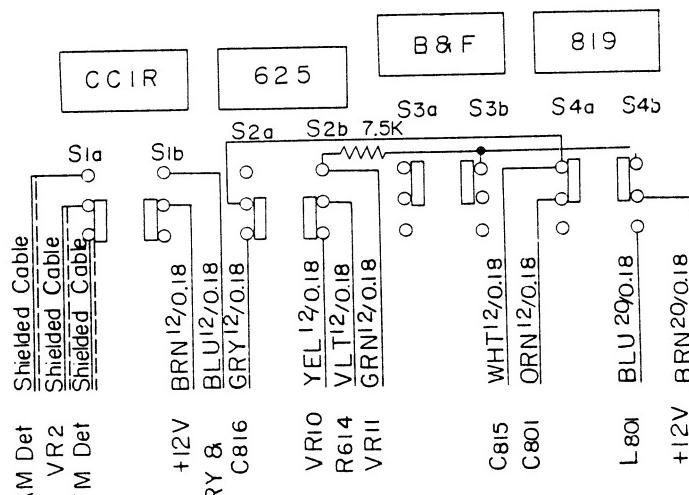
(Fig. 44)

Wiring Diagram

— Standard Selector Buttons —



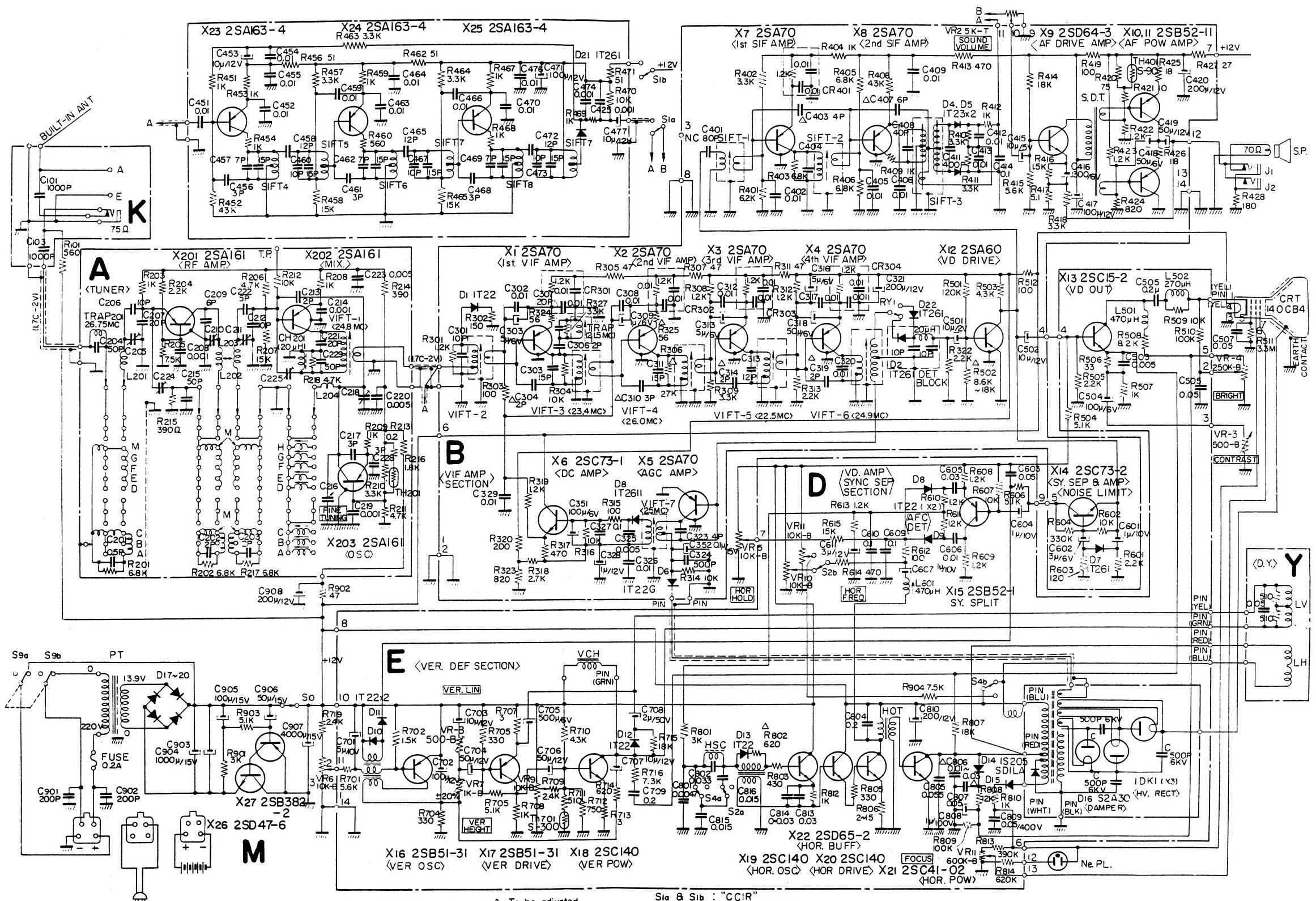
(Fig. 45)



Switch Position when CCIR and 625 Buttons are pressed

(Fig. 46)

Schematic Diagram



Δ To be adjusted

S1a & S1b : "CCIR"
S2a, S2b, S4a & S4b "625"

Trouble Shooting

RASTER

| Symptom | Checking Procedure | | Probable Cause* |
|---------------------------------------|---|--|---|
| 1. No Raster and No Sound | Check resistance between B+ and Ground. | No Resistance Approx. 300Ω | Grounded B+ in any of the Circuit Boards. Power Supply |
| 2. No Raster | Neon Lamp is not lit on. | Replace the Deflection Circuit Board with a new one. Neon Lamp is lit on. | High Voltage Block Deflection Circuit Board (X ₁₉ ~X ₂₂ , D ₈ , HBT, HSC, R ₈₀₆ , HDT, C ₆₀₉ , C ₆₁₀ , D ₁₃ , D ₁₅ , Poor contact of Multi Jack) |
| | Heater of the Picture Tube is lit. | Heater of the Picture Tube is not lit. | 1. High Voltage Block 2. Picture Tube 3. Cathode Circuit 1. Picture Tube 2. Picture Tube Socket |
| 3. Dim Raster | Raster Form is normal. Elongation on left side of Raster. | Replace the Deflection Circuit Board with a new one. Turn the BRT Knob. | Picture Tube High Voltage Block Deflection Circuit Board (D ₁₅ , C ₅₀₅ , VR-4) High Voltage Block |
| 4. Single Horizontal Stripe on Raster | Replace the Deflection Circuit Board with a new one. | The Stripe still appears. The Stripe disappears. | Deflection Yoke Deflection Circuit Board (X ₁₆ ~X ₁₈ , VBT, C ₇₀₁ , C ₇₀₂ , C ₇₀₄ , C ₇₀₆ , C ₇₀₇ , R ₇₁₃) |
| 5. Vertical Shrinkage | | | Deflection Circuit Board (X ₁₆ , X ₁₇ , X ₁₈ , C ₇₀₂ , C ₇₀₃ , C ₇₀₅) Maladjustment of Vert. Bias Current |
| 6. Abnormal Raster | Abnormal Oscillation Excessive Vertical Width Narrow Horizontal Width | | Deflection Circuit Board (D ₁₃ , HBT, C ₈₁₀ , C ₇₀₅) Maladjustment of HSC Deflection Circuit Board (C ₇₀₅) Deflection Circuit Board (C ₅₀₅ , C ₈₀₆) |

DEFLECTION and SYNC

| Symptom | Checking Procedure | | Probable Cause* |
|-----------------------------|--|---------------------------|--|
| 7. No Picture and No Sound | Replace the Signal Circuit Board with a new one. | No Change Normal | Tuner Signal Circuit Board (X ₁ ~X ₄ , X ₁₂ , C ₄₀₁ , C ₅₀₁ , CR ₃₀₁ ~CR ₃₁₄ , VIFT ₂ ~VIFT ₆ , DET Block) |
| 8. No Picture | | Refer to Note on page 25. | Signal Circuit Board (X ₁ ~X ₄ , VIFT ₂ ~VIFT ₆ , C ₃₀₂ , C ₃₀₃ , C ₃₀₅ , C ₃₀₉ , C ₃₁₂ , C ₃₁₃ , C ₃₁₇ , C ₃₁₈ , C ₅₀₄) Deflection Circuit Board (X ₁₃ , D ₁₄ , C ₅₀₄ , C ₈₀₇) |
| 9. Low Contrast | Replace the Deflection Circuit Board with a new one. | No Change Normal | Signal Circuit Board (X ₁ ~X ₄ , X ₁₂ , CR ₃₀₁ ~CR ₃₀₄ , D ₂₂ , DET Block, VIFT ₂ ~VIFT ₆ , C ₃₀₂ , C ₃₀₃ , C ₃₀₅ , C ₃₀₉ , C ₃₁₂ , C ₃₁₃ , C ₃₁₇ , C ₃₁₈) Deflection Circuit Board (X ₁₃ , D ₁₄ , C ₅₀₄ , C ₈₀₇) |
| 10. Saturated Picture | Replace the Deflection Circuit Board with a new one. | No Change Normal | Signal Circuit Board (X ₅ , X ₆ , X ₁₂ , D ₃ , D ₆ , C ₃₂₄ , R ₃₂₂ , R ₅₀₂ , Det. Block) Deflection Circuit Board (D ₁₃ , VR-3, R ₅₀₅ , C ₅₀₄) |
| 11. Loss of Synchronization | Replace the Deflection Circuit Board with a new one. | No Change Normal | Signal Circuit Board (X ₁₄ , R ₆₀₃ , C ₆₀₃) Deflection Circuit Board (X ₁₅ , X ₁₉ , D ₁₁ , VBT, HBT, I ₆₀₁ , C ₆₀₄ , C ₆₀₇ , C ₆₀₉ , R ₆₀₈) Poor contact of Multi-Jack |

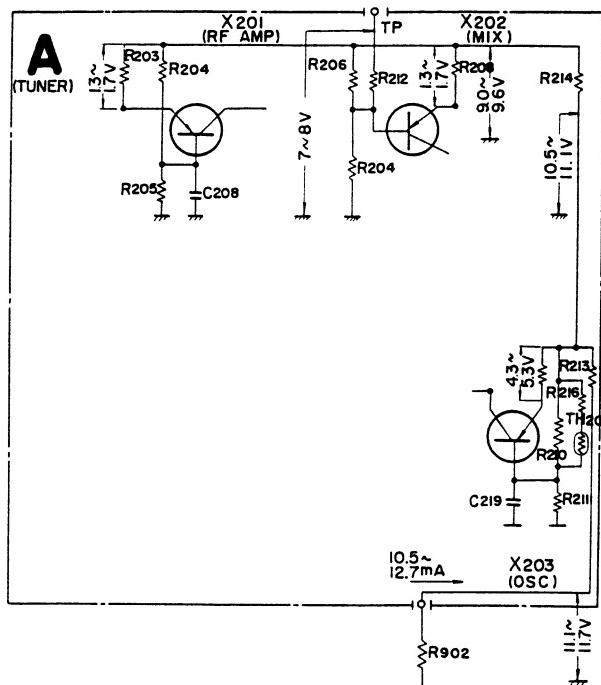
SOUND

| Symptom | Checking Procedure | | Probable Cause* |
|---------------------|---|--|---|
| 12. No Sound | Listen with a Earphone. | Sound is heard through the Earphone. No sound is heard. | Earphone Jack Speaker Signal Circuit Board (X ₇ ~X ₉ , SDT, SIFT ₁ ~SIFT ₄ , CR ₄₀₁) Short of Shielded Wire AM+SIF Circuit Board (X ₂₃ , X ₂₄ , D ₂₁ , SIFT ₄ ~SIFT ₈ , C ₄₇₇ , R ₄₇₁) |
| 13. Weak Sound | Cannot be improved by turning the Fine Tuning Knob. | Replace the Signal Circuit Board with a new one. | Tuner Signal Circuit Board (X ₈ ~X ₁₁ , D ₄ , D ₅ , SDT, C ₄₀₁ , C ₄₀₂ , C ₄₀₅ , C ₄₁₈ , C ₄₂₂) Maladjustment of SIF Circuit |
| 14. Distorted Sound | Listen with a Earphone. | Normal Still distorted | Speaker Signal Circuit Board (X ₁₀ , X ₁₁ , SDT, D ₄ , D ₅ , C ₄₁₈) Maladjustment of SIFT ₃ (Sec.) AM+SIF Circuit Board (D ₂₁ , C ₄₂₅ , C ₄₇₄ , C ₄₇₇) Maladjustment of SIFT ₄ ~SIFT ₈ |
| 15. Buzz | | | Signal Circuit Board (D ₄ , D ₅ , C ₄₁₁ , C ₄₁₄) Maladjustment of SIFT ₃ (Sec.) Incorrect angle of Shielding Plate |

* The cause of trouble may probably be in any of the listed circuits.

Voltage Distribution Chart

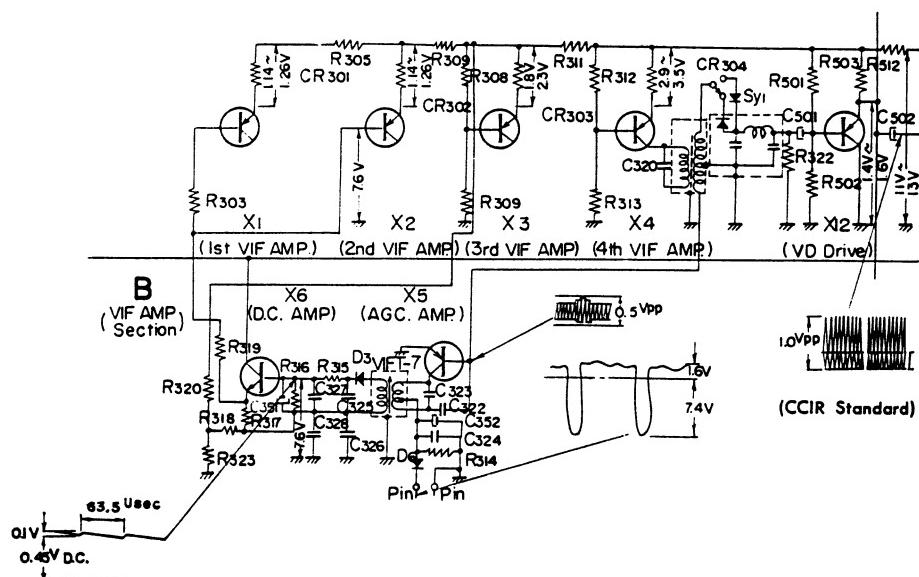
—Tuner—



(Fig. 48)

Voltage Distribution Circuit

—VIF AMP Circuit—

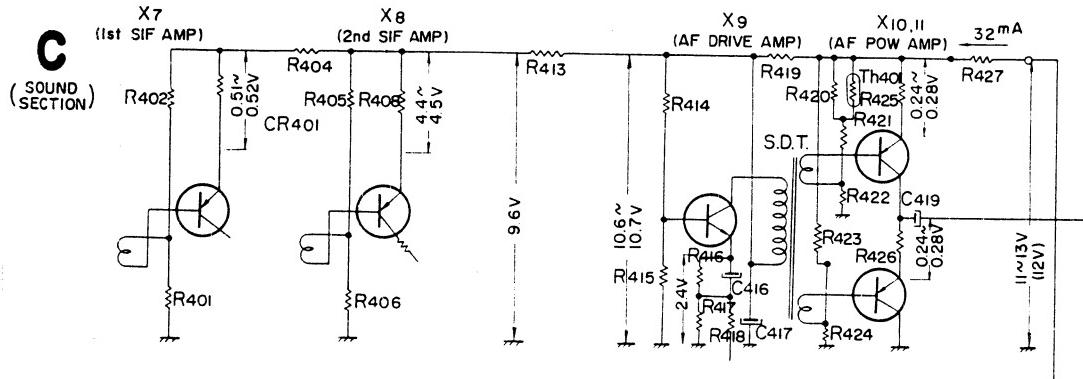


The Switch, SW 1, shown in CCIR Standard

(Fig. 49)

Voltage Distribution Chart

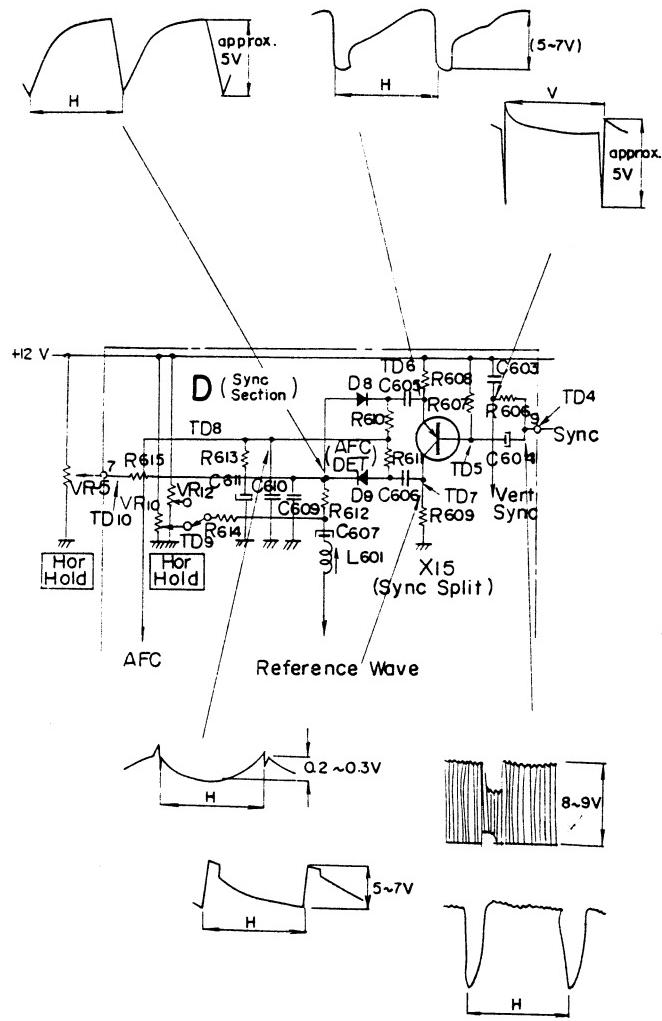
— Sound Circuit —



(Fig. 50)

Voltage Distribution Chart

— SYNC SPLIT Circuit —

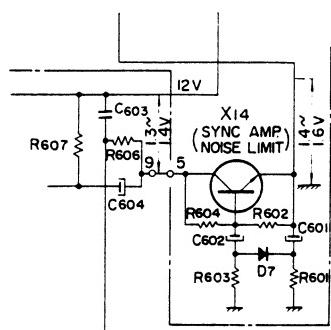


DC Voltage: TD₄...10V, TD₅...11.5V, TD₆...10.5V, TD₇...1.5V
TD₈...5V, TD₉...6.5V, TD₁₀...5.5V

(Fig. 51)

Voltage Distribution Chart

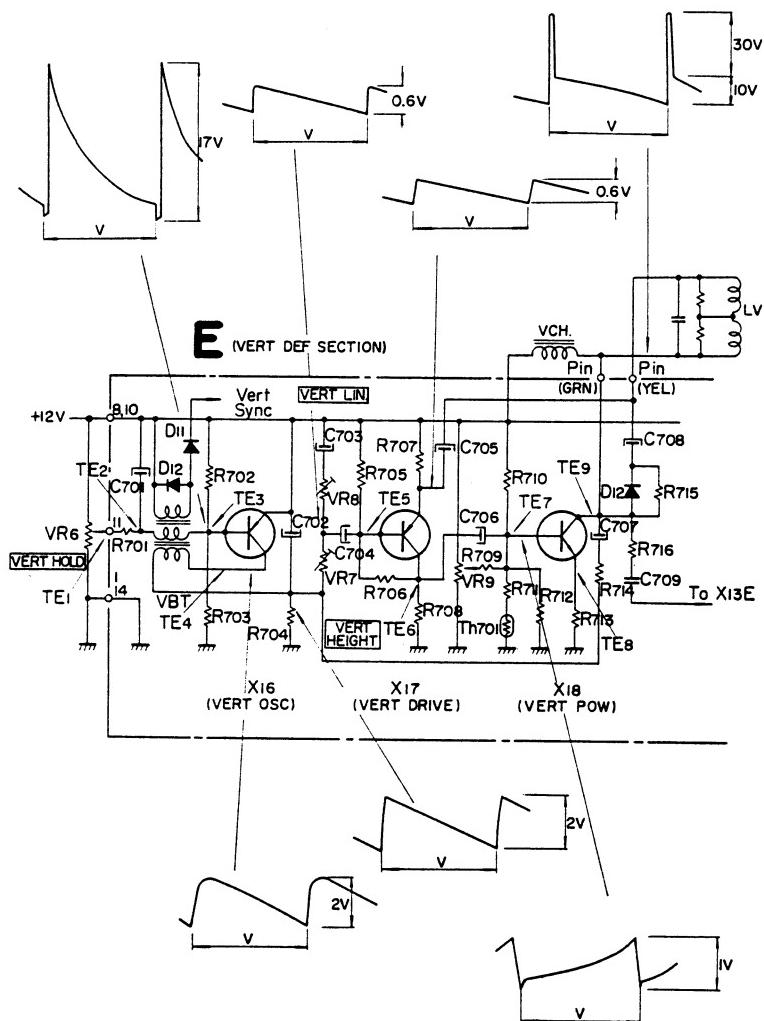
— SYNC SEP, AMP & Noise Limit Circuit —



(Fig. 52)

Voltage Distribution Chart

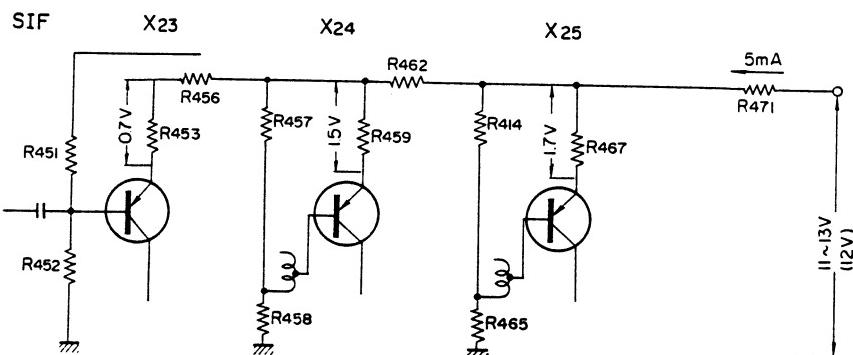
—VERT Deflection Circuit—



(Fig. 53)

Voltage Distribution Chart

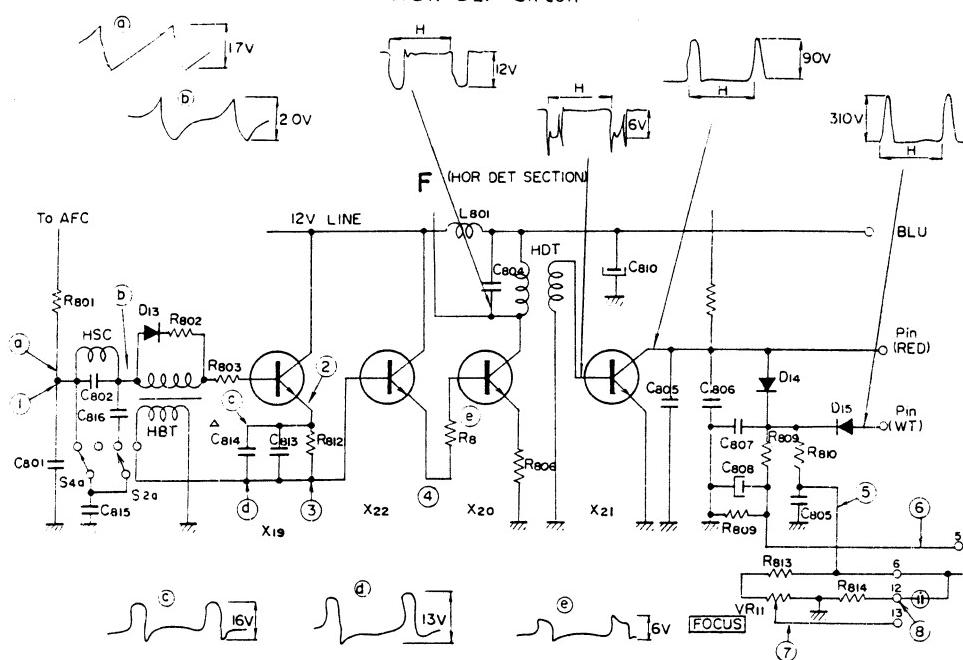
—AM SIF AMP Circuit—



(Fig. 54)

Voltage Distribution Chart

—HOR DEF Circuit—



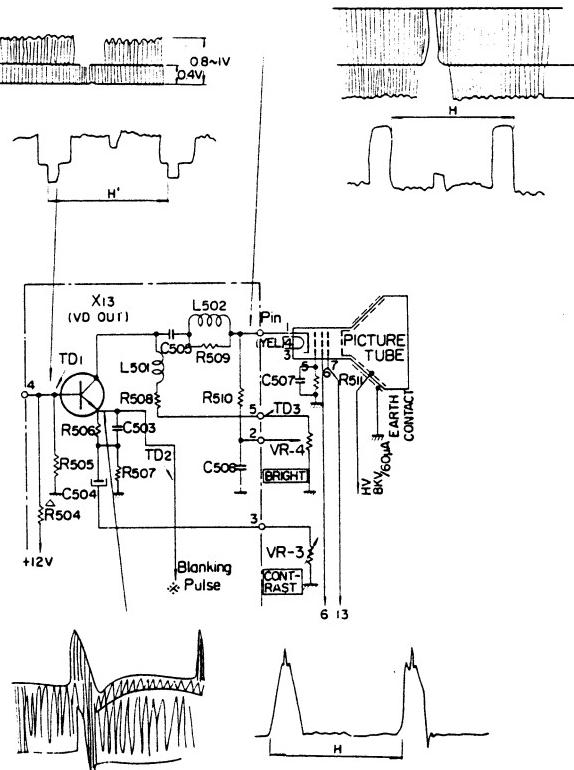
DC Voltage: TD₁...3.2V, TD₂...2.6V, TD₃...50V

DC Voltage: ①...2.1V, ②...2.7V, ③...0.02V, ④...17V
⑤...290V, ⑥...50V, ⑦...50~100V, ⑧...230V

(Fig. 55)

Voltage Distribution Chart

—VIDEO Output Circuit—

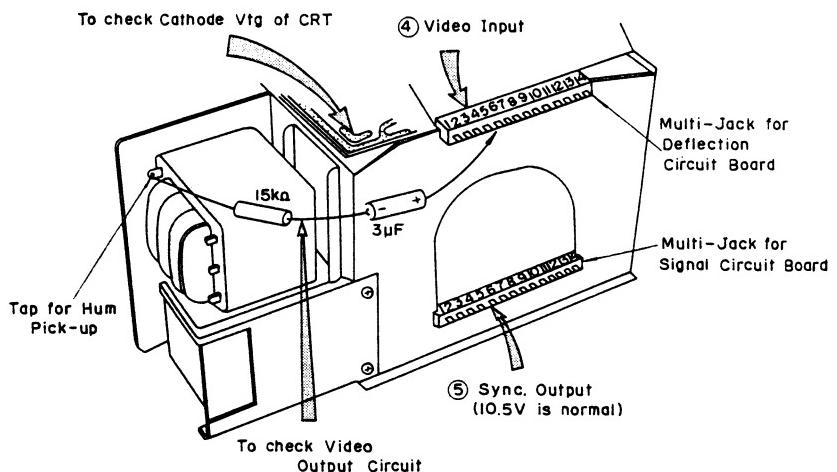


(Fig. 56)

To Check Video Amp. & Synchronization Circuit

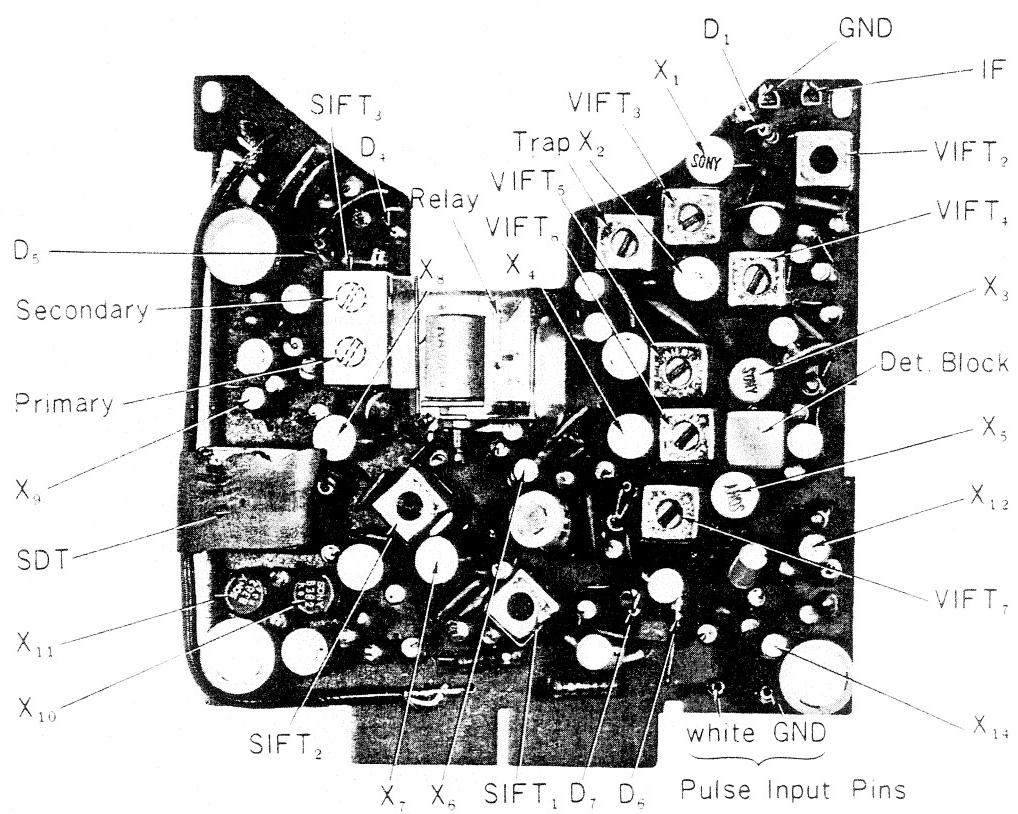
Since the Video Output Circuit of this set is on the Deflection Circuit Board, check the Video Output Circuit as follows.

Apply AC test voltage taken from the secondary winding of the transformer through a $15K\Omega$ Resistor and a $3\mu F$, 500WV or more, Electrolytic Capacitor, to the Terminal No. 4 (The input terminal to the Video Output Circuit) of the Deflection Circuit Board as shown in Fig. 56. If the AC hum appears on the Picture Tube, replace the Signal Circuit Board. If not, replace the Deflection Circuit Board.



(Fig. 57)

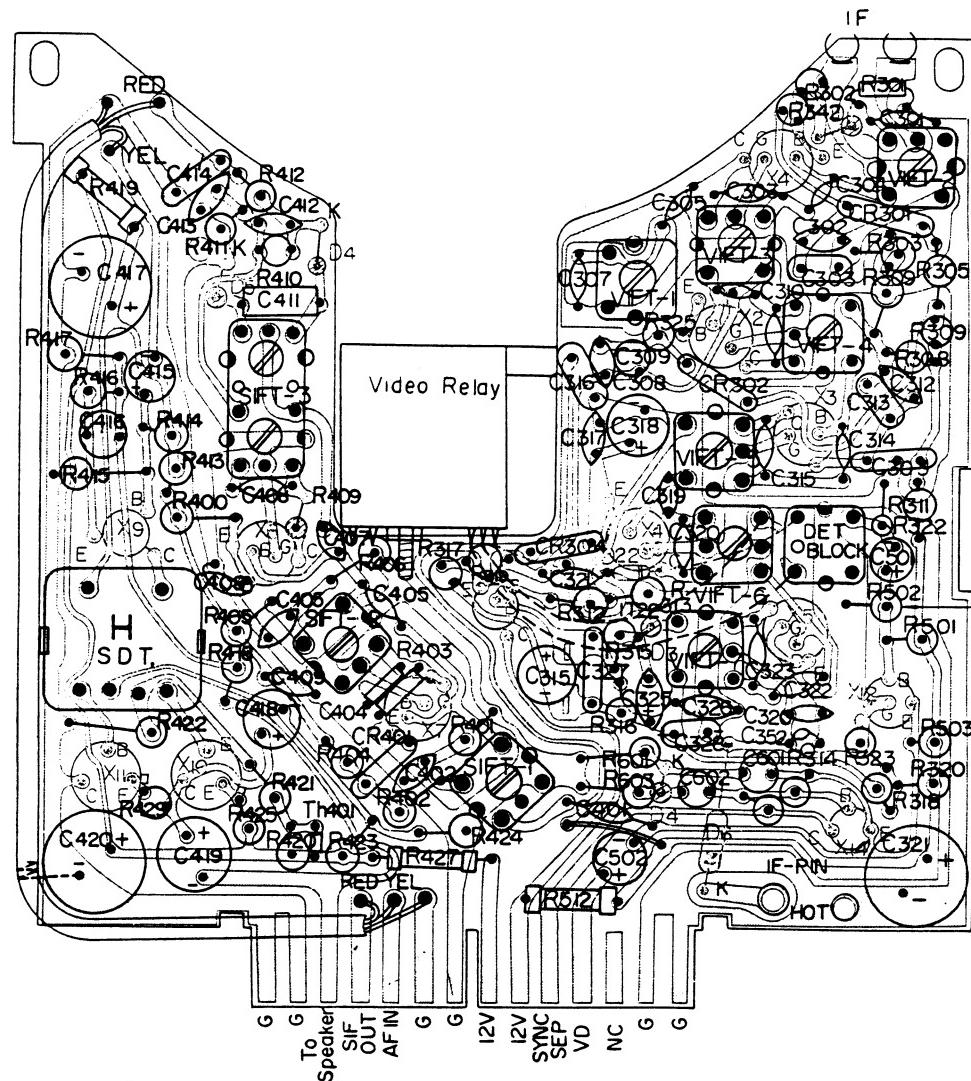
Signal Circuit Board



(Fig. 58)

Mounting Diagram

—Signal Circuit Board—



Transistor (Bottom View)



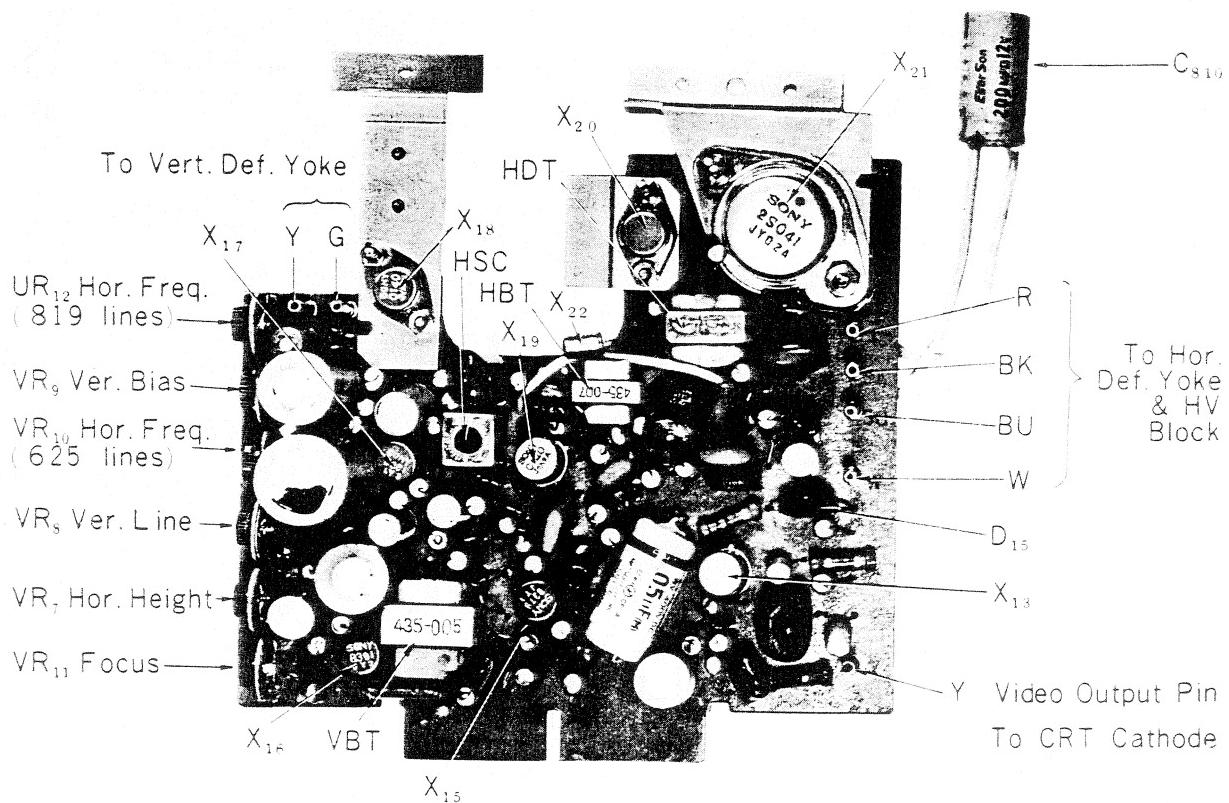
Jumper Wire

PVC Wire (Black)(printed side)

PVC Wire(Yellow)(mounted side)

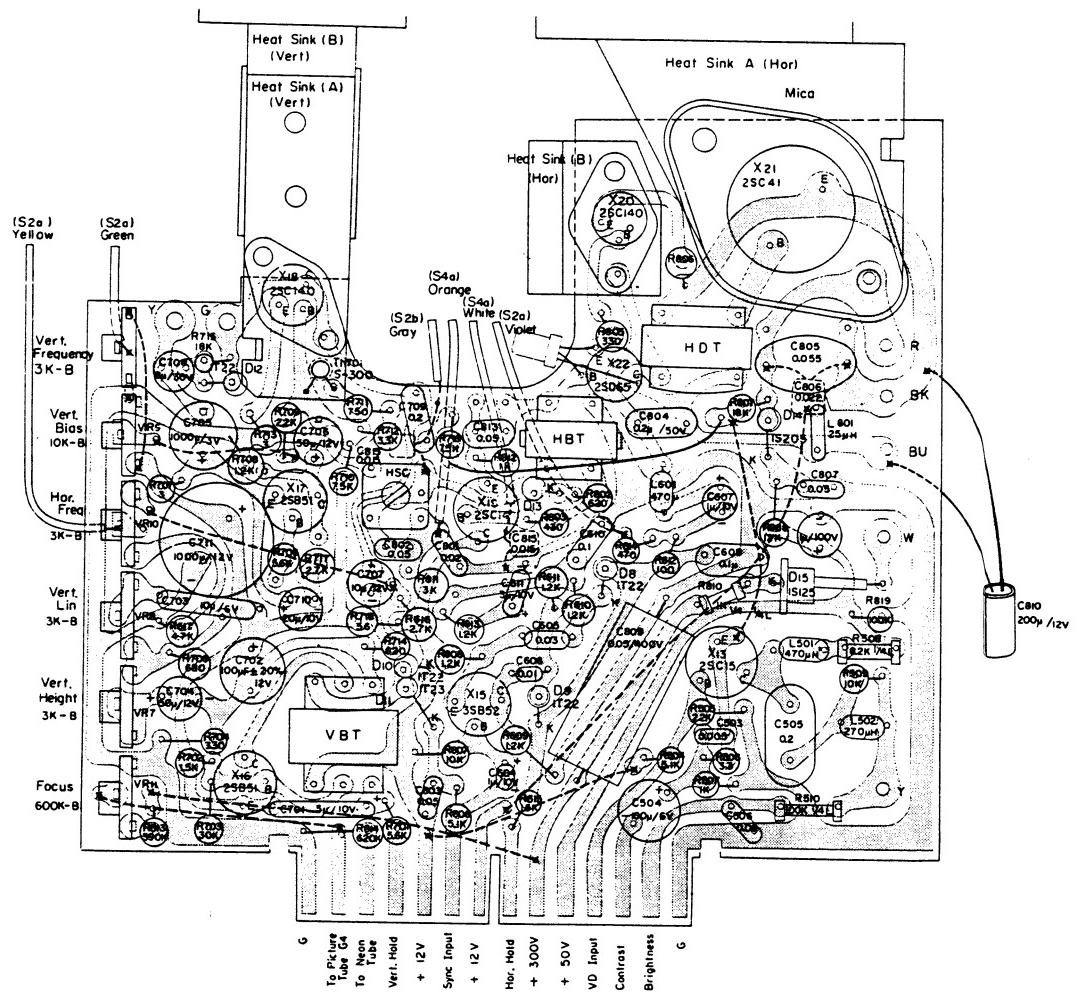
(Fig. 59)

Deflection Circuit Board



(Fig. 60)

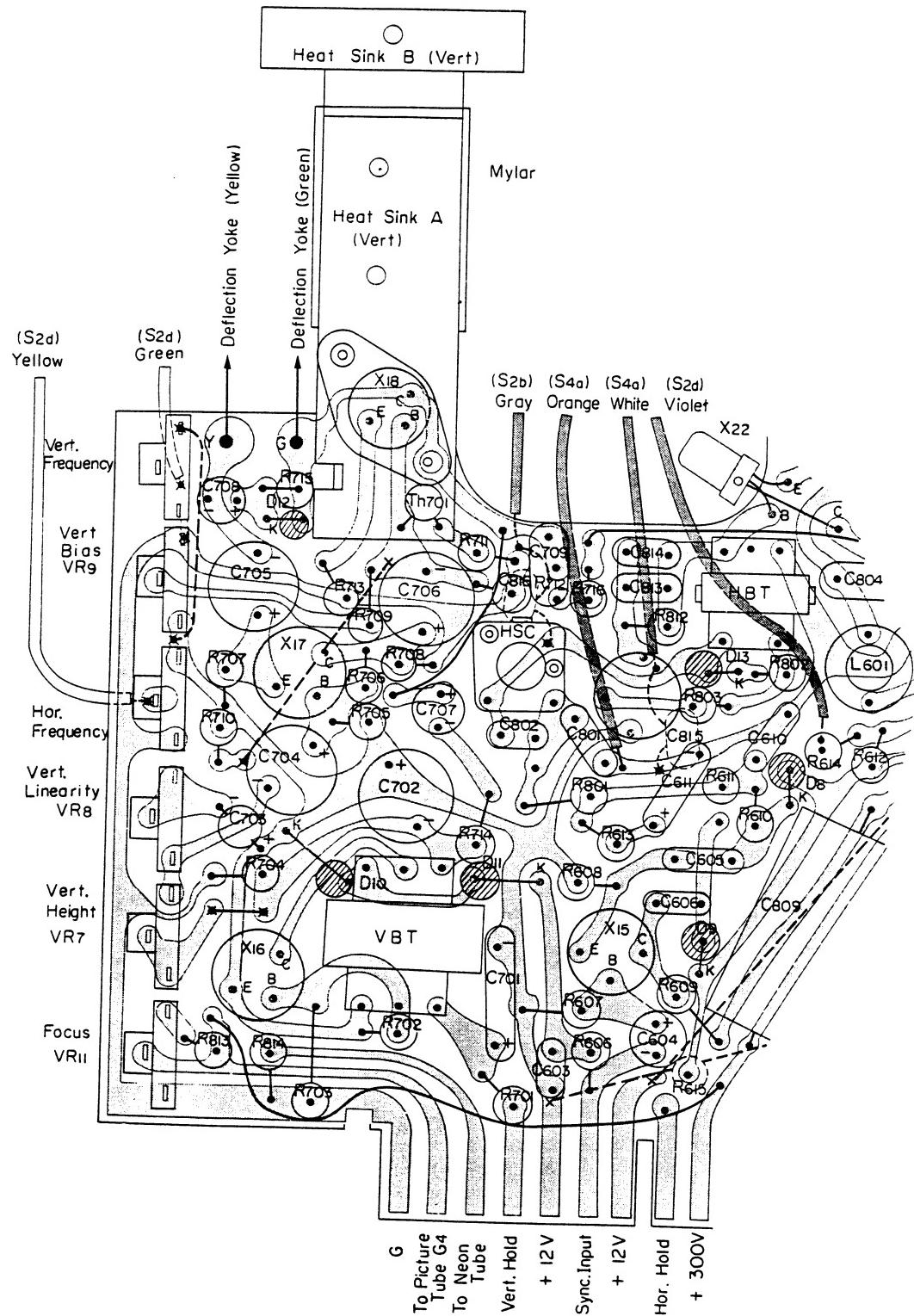
Mounting Diagram
—Deflection Circuit Board—



[Fig. 61]

Mounting Diagram

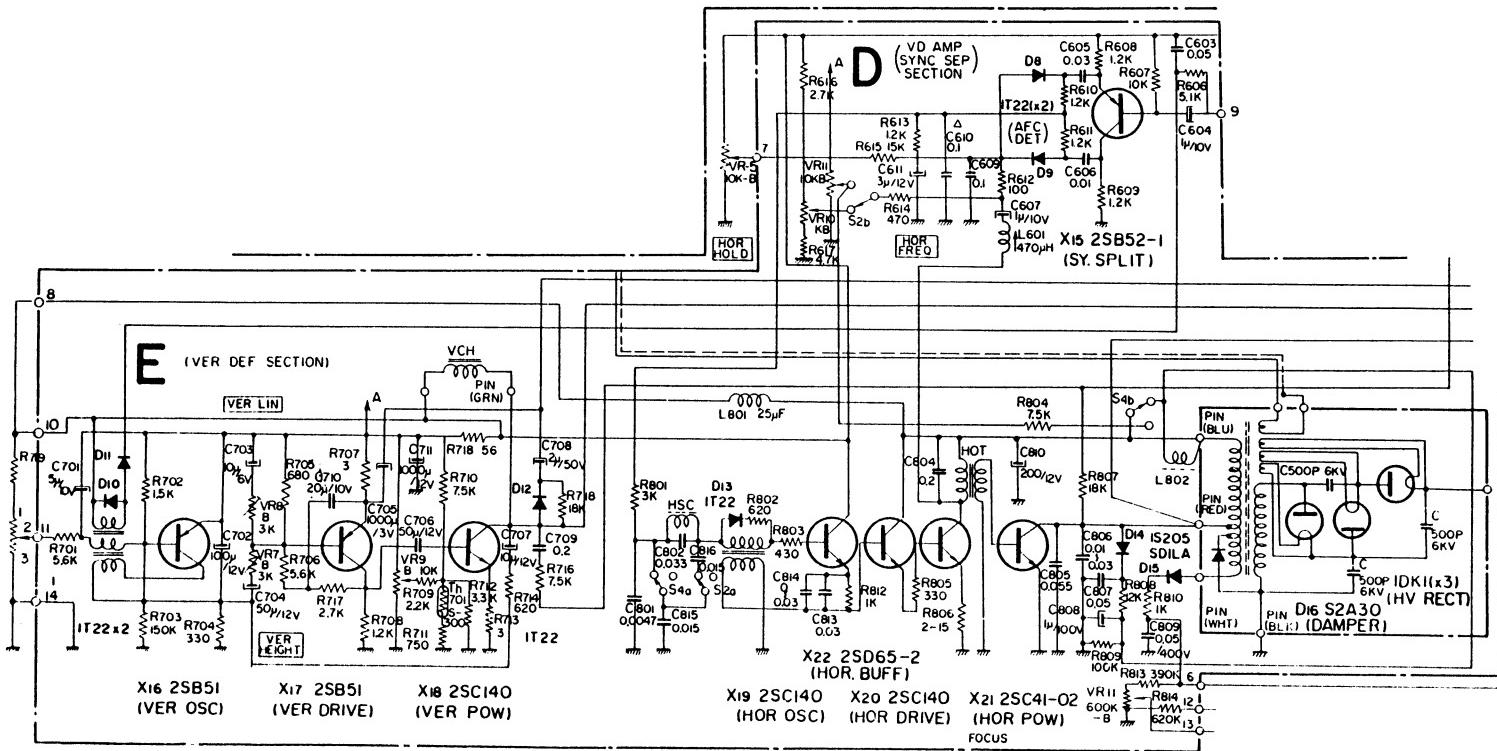
—Deflection Circuit Board—
(for early Set)



(Fig. 62)

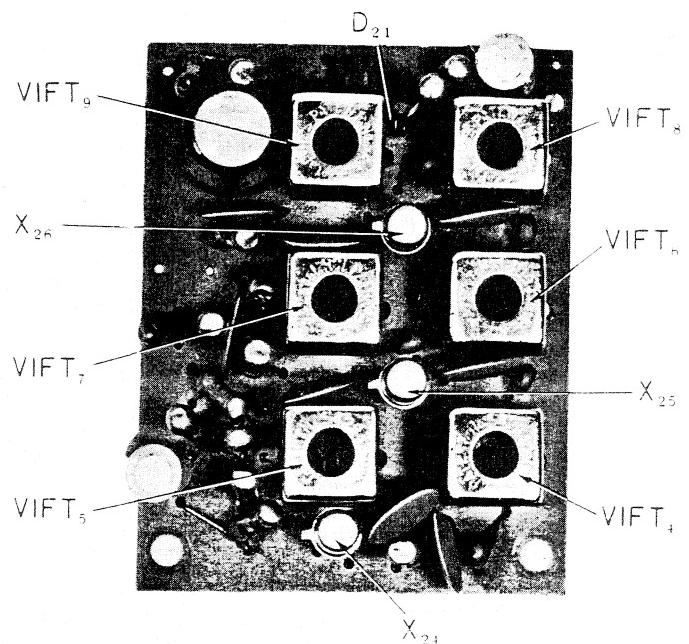
Schematic Diagram Deflection Circuit Board (for early Set)

三



(Fig. 63)

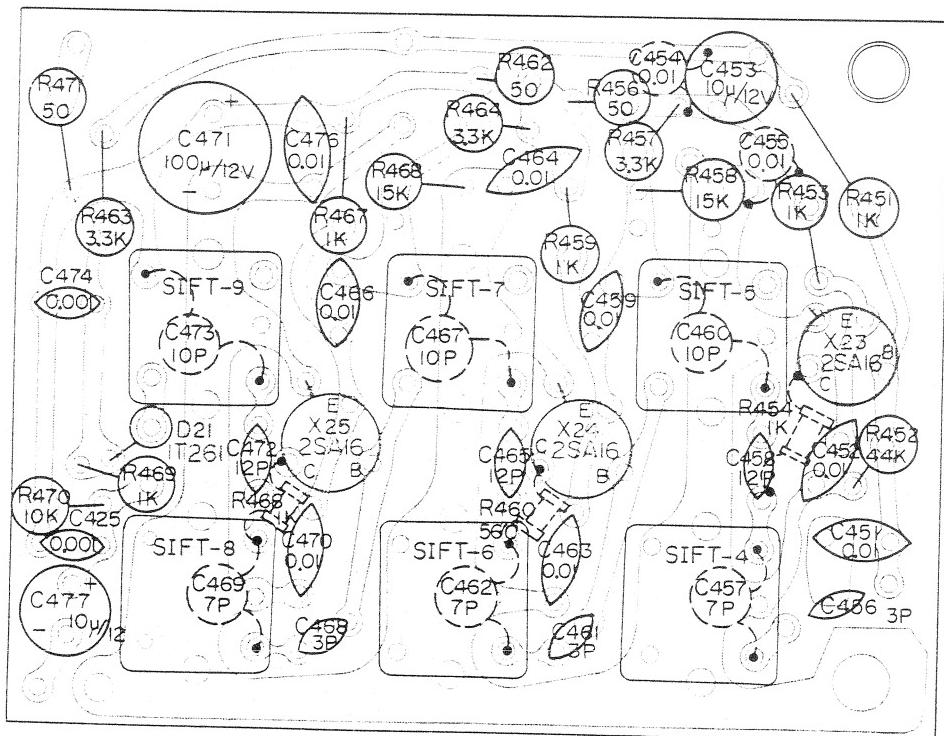
AM SIF Circuit Board



(Fig. 64)

Mounting Diagram

AM SIF Circuit Board



(Fig. 65)

Electrical Parts List (A)

| Part No. | Symbol | Description | Part No. | Symbol | Description |
|--------------------|--------------------|------------------------------------|--------------|---------------------|---------------------------------------|
| | | Transistor | | | |
| X ₂₀₁ | | 2SA 161 (RF AMP) | 1-403-426-11 | VIFT ₂ | Video IF Transformer |
| X ₂₀₂ | | 2SA 161 (MIX) | -424-02 | VIFT ₃ | " |
| X ₂₀₃ | | 2SA161 (OSC) | -425-02 | VIFT ₄ | " |
| X ₁ | | 2SA70 (1st VIF AMP) | -417-02 | VIFT ₅ | " |
| X ₂ | | 2SA70 (2nd VIF AMP) | -418-02 | VIFT ₆ | " |
| X ₃ | | 2SA70 (3rd VIF AMP) | -419-02 | VIFT ₇ | " |
| X ₄ | | 2SA70 (4th VIF AMP) | -306-02 | SIFT ₁ | Sound IF Transformer |
| X ₅ | | 2SA70 (AGC AMP) | -311-02 | SIFT ₂ | " |
| X ₆ | | 2SC73 (DC AMP) | -310-02 | SIFT ₃ | " |
| X ₇ | | 2SA70 (1st SIF AMP) | X-40032-85-1 | L ₃₀₁ | IF Transformer for FM Detector |
| X ₈ | | 2SA70 (2nd SIF AMP) | 1-409-029-12 | Trap ₃₀₁ | Tuner Rotary Coil |
| X ₉ | | 2SD64 (AF DRIVE AMP) | 1-407-001-00 | CH ₃₀₁ | Video IF Trap Coil |
| X ₁₀ | | 2SB52 (AF POW AMP) | -013-03 | Trap 1 | IF Choke Coil |
| X ₁₁ | | 2SB52 (AF POW AMP) | 1-403-420-00 | DET | Sound Signal Trap |
| X ₁₂ | | 2SA60 (VD DRIVE) | 1-423-048-00 | SDT | Video Detector Block |
| X ₁₃ | | 2SC15 (VD OVT) | 1-411-003-11 | L ₅₀₁ | Sound Driver Transformer |
| X ₁₄ | | 2SC73 (SYNC SEP. AMP, NOISE LIMIT) | -002-11 | L ₅₀₂ | Peaking Coil 470μH |
| X ₁₅ | | 2SB382 (SY SPLIT) | -003-11 | L ₆₀₁ | " 270μH |
| X ₁₆ | | 2SB381 (VER OSC) | 1-421-106-17 | L ₉₀₂ | " 470μH |
| X ₁₇ | | 2SB381 (VER DRIVE) | 1-413-011-11 | HSC | Horizontal Choke Coil |
| X ₁₈ | | 2SC140 (VER POW) | 1-435-005-00 | VBT | Vertical Blocking Transformer |
| X ₁₉ | | 2SC140 (HOR OSC) | 1-421-106-17 | VCH | Vertical Output Choke Coil |
| X ₂₀ | | 2SC140 (HOR DRIVE) | 1-439-003-02 | HOT | Stabilizing Coil for Horizontal Sweep |
| X ₂₁ | | 2SC41 (HOR POW) | 1-437-002-00 | HDT | Horizontal Blocking Transformer |
| X ₂₂ | | 2SD65 (HOR BUFFER) | 1-441-147-11 | PT | Horizontal Driver Transformer |
| X ₂₃ | | 2SA163 | | | Horizontal Output Transformer |
| X ₂₄ | | 2SA163 | | | Power Transformer |
| X ₂₅ | | 2SA163 | | | |
| X ₂₆ | | 2SD47 | 1-221-276-11 | VR ₂ | Potentiometer |
| X ₂₇ | | 2SB382 | -275-11 | VR ₃ | Volume Control 5KΩ-T |
| | | | -265-11 | VR ₄ | Contrast Control 500Ω-E |
| | | | -297-11 | VR ₅ | Brightness Control 250KΩ-B |
| D ₁ | D ₁ | 1T22AJ | -297-11 | VR ₆ | Horizontal Hold Control 10KΩ-B |
| D ₂ | D ₂ | 1T261J | -335-00 | VR ₇ | Vertical Hold Control 10KΩ-B |
| D ₃ | D ₃ | 1T261J | -326-00 | VR ₈ | Vertical Height Control 1KΩ-B |
| D ₄ | D ₄ | 1T23J | -327-00 | VR ₉ | Vertical Linearity Control 500Ω-B |
| D ₅ | D ₅ | 1T23J | -327-00 | VR ₁₀ | Vertical Bias Control 10KΩ-B |
| D ₆ | D ₆ | 1T22AJ | -351-00 | VR ₁₁ | Horizontal Frequency Control 10KΩ-B |
| D ₇ | D ₇ | 1T261J | | | Focus Control 600KΩ-B |
| D ₈ | D ₈ | 1T22AJ | | | |
| D ₉ | D ₉ | 1T22AJ | 1-101-406-01 | CR ₃₀₁ | Encapsulated Component |
| D ₁₀ | D ₁₀ | 1T22AJ | -406-01 | CR ₃₀₂ | 1.2KΩ 0.01μF 0.01μF |
| D ₁₁ | D ₁₁ | 1T22AJ | -406-01 | CR ₃₀₃ | " |
| D ₁₂ | D ₁₂ | 1T22AJ | -406-01 | CR ₃₀₄ | " |
| D ₁₃ | D ₁₃ | 1T22AJ | -406-01 | CR ₃₀₅ | " |
| D ₁₄ | D ₁₄ | 1S205 | | | |
| D ₁₅ | D ₁₅ | SD-1LA | | | |
| D ₁₆ | D ₁₆ | S2A30 | 1-201-454-01 | R ₁₀₁ | Resistor |
| D _{17~20} | D _{17~20} | Selenium Rectifier | 1-203-190-00 | R ₂₀₁ | 560Ω RC _{1/4} L |
| D ₂₁ | D ₂₁ | 1T261J | 1-204-111-11 | R ₂₀₂ | 10KΩ RD _{1/16} L |
| D ₂₂ | D ₂₂ | 1T261J | -111-11 | R ₂₀₃ | 6.8KΩ RD _{1/32} L |
| | | | 1-203-184-00 | R ₂₀₄ | " " |
| | | | -188-00 | R ₂₀₅ | 2.2KΩ RD _{1/16} L |
| 1-800-001-00 | Th ₃₀₁ | S-10K | -182-00 | R ₂₀₆ | 7.5KΩ " |
| 8-860-003-00 | Th ₄₀₁ | S-90 | -181-00 | R ₂₀₇ | 1KΩ " |
| 8-860-005-00 | Th ₇₀₁ | S-300 | -185-00 | R ₂₀₈ | 390Ω " |
| | | | -889-00 | R ₂₀₉ | 4.7KΩ " |
| | | | 1-204-204-00 | R ₂₁₀ | 27KΩ " |
| 1-525-039-00 | | HV Rectifier | 1-203-184-00 | R ₂₁₁ | 240Ω " |
| | | 1DK1 | -182-00 | R ₂₁₂ | 2.2KΩ " |
| | | | -182-00 | R ₂₁₃ | 1KΩ " |
| 1-403-401-00 | VIFT ₁ | Coil and Transformer | -460-00 | R ₂₁₄ | 1KΩ " |
| | | Video IF Transformer | | | 2.7KΩ " |

—continued—

| Part No. | Symbol | Description | Part No. | Symbol | Description |
|--------------|------------------|-----------------------------------|--------------|------------------|------------------------------------|
| 1-203-190-00 | R ₂₁₅ | 10K Ω RD $\frac{1}{16}$ L | 1-203-434-00 | R ₄₆₄ | 3.3K Ω RD $\frac{1}{16}$ RL |
| -460-00 | R ₂₁₆ | 2.7K Ω " | -629-00 | R ₄₆₅ | 15K Ω " |
| -187-00 | R ₂₁₇ | 6.8K Ω " | -421-00 | R ₄₆₇ | 1K Ω " |
| -185-00 | R ₂₁₈ | 4.7K Ω " | -182-00 | R ₄₆₈ | 1K Ω RD $\frac{1}{16}$ L |
| 1-201-457-00 | R ₃₀₁ | 1.2K Ω RC $\frac{1}{8}$ L | -421-00 | R ₄₆₉ | 1K Ω RD $\frac{1}{16}$ RL |
| 1-203-415-00 | R ₃₀₂ | 150 Ω RD $\frac{1}{8}$ RL | -427-00 | R ₄₇₀ | 10K Ω " |
| -357-00 | R ₃₀₃ | 100 Ω " | 1-204-210-11 | R ₄₇₁ | 51 Ω " |
| -190-00 | R ₃₀₄ | 10K Ω RD $\frac{1}{16}$ L | 1-203-400-00 | R ₅₀₁ | 120K Ω RD $\frac{1}{8}$ RL |
| -414-00 | R ₃₀₅ | 47 Ω RD $\frac{1}{8}$ RL | -386-00 | R ₅₀₂ | 15K Ω " |
| -889-00 | R ₃₀₆ | 27K Ω RD $\frac{1}{16}$ L | -375-00 | R ₅₀₃ | 4.3K Ω " |
| -414-00 | R ₃₀₇ | 47 Ω RD $\frac{1}{8}$ RL | -377-00 | R ₅₀₄ | 5.1K Ω " |
| -368-00 | R ₃₀₈ | 1.2K Ω " | -370-00 | R ₅₀₅ | 2.2K Ω " |
| -373-00 | R ₃₀₉ | 3.3K Ω " | -354-00 | R ₅₀₆ | 33 Ω " |
| -414-00 | R ₃₁₁ | 47 Ω " | -367-00 | R ₅₀₇ | 1.0K Ω " |
| -368-00 | R ₃₁₂ | 1.2K Ω " | -403-00 | R ₅₀₈ | 8.2K Ω " |
| -370-00 | R ₃₁₃ | 2.2K Ω " | -383-00 | R ₅₀₉ | 10K Ω " |
| -412-00 | R ₃₁₄ | 390 Ω " | -100-00 | R ₅₁₀ | 100K Ω RD $\frac{1}{4}$ L |
| -357-00 | R ₃₁₅ | 100 Ω " | 1-201-596-00 | R ₅₁₁ | 3.3M Ω RC $\frac{1}{8}$ L |
| -383-00 | R ₃₁₆ | 10K Ω " | 1-203-011-00 | R ₅₁₂ | 100 Ω RD $\frac{1}{4}$ L |
| -361-00 | R ₃₁₇ | 470 Ω " | -387-00 | R ₆₀₁ | 22K Ω RD $\frac{1}{8}$ RL |
| -372-00 | R ₃₁₈ | 2.7K Ω " | -383-00 | R ₆₀₂ | 10K Ω " |
| -368-00 | R ₃₁₉ | 12K Ω " | -759-00 | R ₆₀₃ | 120 Ω " |
| -404-00 | R ₃₂₀ | 200 Ω " | -411-00 | R ₆₀₄ | 330K Ω " |
| -370-00 | R ₃₂₂ | 2.2K Ω " | -377-00 | R ₆₀₆ | 5.1K Ω " |
| -366-00 | R ₃₂₃ | 820 Ω " | -383-00 | R ₆₀₇ | 10K Ω " |
| 1-201-657-00 | R ₃₂₄ | 56 Ω RC $\frac{1}{8}$ L | -368-00 | R ₆₀₈ | 1.2K Ω " |
| -657-00 | R ₃₂₅ | 56 Ω " | -368-00 | R ₆₀₉ | 1.2K Ω " |
| 1-203-884-00 | R ₃₂₇ | 33K Ω RD $\frac{1}{16}$ L | -363-00 | R ₆₁₀ | 1.2K Ω " |
| -380-00 | R ₄₀₁ | 6.2K Ω RD $\frac{1}{8}$ RL | -368-00 | R ₆₁₁ | 1.2K Ω " |
| -373-00 | R ₄₀₂ | 3.3K Ω " | -357-00 | R ₆₁₂ | 100 Ω " |
| 1-201-123-00 | R ₄₀₃ | 6.8K Ω RC $\frac{1}{8}$ L | -368-00 | R ₆₁₃ | 1.2K Ω " |
| 1-203-381-00 | R ₄₀₅ | 6.8K Ω RD $\frac{1}{8}$ RL | -561-00 | R ₆₁₄ | 470 Ω " |
| -381-00 | R ₄₀₆ | 6.8K Ω " | -385-00 | R ₆₁₅ | 15K Ω " |
| -375-00 | R ₄₀₇ | 4.3K Ω " | -378-00 | R ₇₀₁ | 5.6K Ω " |
| 1-201-133-00 | R ₄₀₉ | 1K Ω RC $\frac{1}{8}$ L | -405-00 | R ₇₀₂ | 1.5K Ω " |
| 1-203-373-00 | R ₄₁₀ | 3.3K Ω RD $\frac{1}{8}$ RL | -360-00 | R ₇₀₄ | 330 Ω " |
| -373-00 | R ₄₁₁ | 3.3K Ω " | -360-00 | R ₇₀₅ | 330 Ω " |
| -367-00 | R ₄₁₂ | 1K Ω " | -377-00 | R ₇₀₆ | 5.1K Ω " |
| -361-00 | R ₄₁₃ | 470 Ω " | 1-207-018-00 | R ₇₀₇ | 3 Ω RW $\frac{1}{4}$ RL |
| -385-00 | R ₄₁₄ | 18K Ω " | 1-203-367-00 | R ₇₀₈ | 1.0K Ω RD $\frac{1}{8}$ RL |
| -378-00 | R ₄₁₅ | 5.6K Ω " | -773-00 | R ₇₀₉ | 2.4K Ω " |
| -405-00 | R ₄₁₆ | 1.5K Ω " | -306-00 | R ₇₁₀ | 4.3K Ω " |
| -351-00 | R ₄₁₇ | 5.1 Ω " | -316-00 | R ₇₁₁ | 510 Ω " |
| -370-00 | R ₄₁₈ | 2.2K Ω " | -335-00 | R ₇₁₂ | 750 Ω " |
| -011-00 | R ₄₁₉ | 100 Ω RD $\frac{1}{4}$ L | 1-207-018-00 | R ₇₁₃ | 3 Ω RW $\frac{1}{4}$ RL |
| -356-00 | R ₄₂₀ | 75 Ω RD $\frac{1}{8}$ RL | 1-203-857-00 | R ₇₁₄ | 620 Ω RD $\frac{1}{8}$ RL |
| -315-00 | R ₄₂₁ | 10 Ω " | 1-201-147-00 | R ₇₁₅ | 18K Ω RC $\frac{1}{8}$ L |
| -368-00 | R ₄₂₂ | 1.2K Ω " | 1-203-382-00 | R ₇₁₆ | 7.5K Ω RD $\frac{1}{8}$ RL |
| -368-00 | R ₄₂₃ | 1.2K Ω " | -773-00 | R ₇₁₉ | 2.4K Ω " |
| -308-00 | R ₄₂₅ | 18 Ω " | -443-00 | R ₈₀₁ | 3.0K Ω " |
| -308-00 | R ₄₂₆ | 18 Ω " | -857-00 | R ₈₀₂ | 620 Ω " |
| -006-00 | R ₄₂₇ | 27 Ω RD $\frac{1}{4}$ L | -760-00 | R ₈₀₃ | 430 Ω " |
| -334-00 | R ₄₂₇ | 180 Ω " | -360-00 | R ₈₀₃ | 330 Ω " |
| -421-00 | R ₄₅₁ | 1K Ω RD $\frac{1}{16}$ RL | 1-207-024-00 | R ₈₁₀ | 8.2 Ω RW $\frac{1}{4}$ RL |
| -430-00 | R ₄₅₂ | 43K Ω " | 1-203-386-00 | R ₈₁₇ | 18K Ω RD $\frac{1}{8}$ RL |
| -421-00 | R ₄₅₃ | 1K Ω " | -384-00 | R ₈₁₈ | 12K Ω " |
| -182-00 | R ₄₅₄ | 1K Ω RD $\frac{1}{16}$ L | -399-00 | R ₈₁₉ | 100K Ω " |
| 1-204-210-11 | R ₄₅₆ | 51 Ω RD $\frac{1}{16}$ RL | -031-00 | R ₈₂₀ | 1K Ω RD $\frac{1}{4}$ L |
| 1-203-434-00 | R ₄₅₇ | 3.3K Ω " | -367-00 | R ₈₂₃ | 1K Ω RD $\frac{1}{8}$ RL |
| -659-00 | R ₄₅₈ | 15K Ω " | -867-00 | R ₈₂₃ | 390K Ω " |
| -421-00 | R ₄₅₉ | 1K Ω " | -868-00 | R ₈₂₄ | 620K Ω " |
| -488-00 | R ₄₆₀ | 560 Ω RD $\frac{1}{16}$ L | -306-00 | R ₉₀₁ | 4.3K Ω " |
| 1-204-210-11 | R ₄₆₂ | 51 Ω RD $\frac{1}{16}$ RL | -148-00 | R ₉₀₂ | 47 Ω RD $\frac{1}{4}$ L |
| 1-203-434-00 | R ₄₆₃ | 3.3K Ω " | -377-00 | R ₉₀₃ | 5.1K Ω RD $\frac{1}{8}$ RL |

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| Part No. | Symbol | Description | Part No. | Symbol | Description |
|--------------|------------------|------------------------------------|--------------|------------------|------------------------------------|
| 1-203-382-00 | R ₉₀₄ | 7.5K Ω RD _{1/8} RL | 1-121-244-11 | C ₃₅₂ | 0.1 μ F 25WV Electrolytic |
| 1-101-001-01 | C ₁₀₁ | Capacitor 0.001 μ F Ceramic | 1-101-112-01 | C ₄₀₁ | 50PF Ceramic |
| -001-01 | C ₁₀₃ | 0.001 μ F " | -004-01 | C ₄₀₂ | 0.01 μ F 250WV Ceramic |
| -562-11 | C ₂₀₁ | 50PF " | -069-01 | C ₄₀₃ | 4PF Ceramic |
| -076-00 | C ₂₀₂ | 2PF " | -319-01 | C ₄₀₄ | 70PF " |
| -076-00 | C ₂₀₃ | 2PF " | -004-01 | C ₄₀₅ | 0.01 μ F 50WV Ceramic |
| 1-101-030-11 | C ₂₀₄ | 200PF " | -004-01 | C ₄₀₆ | 0.01 μ F 50WV " |
| 1-141-060-11 | C ₂₀₅ | Cylindrical Trimmer Capacitor | -085-01 | C ₄₀₇ | 6PF Ceramic |
| 1-101-061-11 | C ₂₀₆ | 10PF Ceramic | -129-01 | C ₄₀₈ | 40PF " |
| | C ₂₀₇ | 20PF " | -004-01 | C ₄₀₉ | 0.01 μ F 50WV Ceramic |
| 1-101-547-11 | C ₂₀₈ | 0.0012 μ F " | 1-103-023-11 | C ₄₁₁ | 400PF Micro Styrole Capacitor |
| -553-11 | C ₂₀₉ | 3PF " | -118-01 | C ₄₁₂ | 0.01 μ F 50WV Ceramic |
| -060-11 | C ₂₁₀ | Cylindrical Trimmer Capacitor | 1-101-118-01 | C ₄₁₃ | 0.01 μ F 50WV " |
| -562-11 | C ₂₁₁ | " | -086-01 | C ₄₁₄ | 0.1 μ F 50WV " |
| 1-141-060-11 | C ₂₁₂ | " | 1-121-104-05 | C ₄₁₅ | 10 μ F 6WV Electrolytic |
| -060-11 | C ₂₁₃ | " | -102-05 | C ₄₁₆ | 30 μ F 6WV " |
| -038-11 | C ₂₁₄ | 5PF Ceramic | -120-01 | C ₄₁₇ | 100 μ F 12WV " |
| 1-101-061-11 | C ₂₁₅ | 10PF " | -135-05 | C ₄₁₈ | 50 μ F 6WV " |
| -061-11 | C ₂₁₆ | Cylindrical Trimmer Capacitor | -122-05 | C ₄₁₉ | 50 μ F 12WV " |
| -027-11 | C ₂₁₇ | 20PF Ceramic | -121-01 | C ₄₂₀ | 200 μ F 12WV " |
| -547-11 | C ₂₁₈ | 0.0012 μ F " | 1-101-004-11 | C ₄₅₁ | 0.01 μ F 50V Ceramic |
| -562-11 | C ₂₁₉ | 200PF " | -004-11 | C ₄₅₂ | " " |
| -547-11 | C ₂₂₀ | 0.012 μ F " | 1-121-118-11 | C ₄₅₃ | 10 μ F 12WV Electrolytic |
| -533-11 | C ₂₂₁ | 3PF " | 1-101-004-11 | C ₄₅₄ | 0.01 μ F 50V Ceramic |
| 1-141-060-11 | C ₂₂₂ | Cylindrical Trimmer Capacitor | -011-11 | C ₄₅₅ | 3PF 50V " |
| -054-11 | C ₂₂₃ | Piston Trimmer A | -094-11 | C ₄₅₆ | 7PF 50V " |
| 1-101-553-11 | C ₂₂₄ | 3PF Ceramic | -130-11 | C ₄₅₇ | 12PF 50V " |
| -027-11 | C ₂₂₅ | 20PF " | -004-11 | C ₄₅₈ | 0.01 μ F 50V " |
| -554-11 | C ₂₂₆ | 4PF " | -094-11 | C ₄₅₉ | 3PF 50V " |
| -547-11 | C ₂₂₇ | 0.0012 μ F " | -011-11 | C ₄₆₀ | 7PF 50V " |
| -201-12 | C ₂₂₈ | 0.0018 μ F " | -094-11 | C ₄₆₁ | 3PF 50V " |
| -783-11 | C ₂₂₉ | 30PF " | -004-11 | C ₄₆₂ | 7PF 50V " |
| -072-14 | C ₂₃₁ | 0.01 μ F " | -130-11 | C ₄₆₃ | 0.01 μ F 50V " |
| -645-01 | C ₂₃₀ | 10PF " | -004-11 | C ₄₆₄ | 0.01 μ F 50V " |
| -001-01 | C ₂₃₀ | 0.01 μ F " | -094-11 | C ₄₆₅ | 12PF 50V " |
| -106-01 | C ₂₃₃ | 5 μ F 6WV Electrolytic | -011-11 | C ₄₆₆ | 0.01 μ F 50V " |
| -046-01 | C ₂₃₄ | 2PF Ceramic | -061-11 | C ₄₆₇ | 7PF 50V " |
| -114-01 | C ₂₃₅ | 15PF " | -004-11 | C ₄₆₈ | 3PF 50V " |
| 1-101-046-01 | C ₂₃₆ | 2PF " | -044-11 | C ₄₆₉ | 10PF 50V " |
| -111-01 | C ₂₃₇ | 200PF " | 1-121-120-11 | C ₄₇₀ | 0.01 μ F 50V " |
| -004-01 | C ₂₃₈ | 0.01 μ F 50WV Ceramic | 1-101-130-11 | C ₄₇₁ | 100 μ F 12WV Electrolytic |
| 1-121-145-05 | C ₂₃₉ | 1 μ F 6WV Electrolytic | -061-11 | C ₄₇₂ | 12PF 50V Ceramic |
| 1-101-036-01 | C ₂₄₀ | 3PF Ceramic | -455-11 | C ₄₇₃ | 10PF 50V " |
| -114-01 | C ₂₄₁ | 15PF " | -455-11 | C ₄₇₄ | 0.01 μ F 50V " |
| -004-01 | C ₂₄₂ | 0.01 μ F 50WV Ceramic | 1-121-118-11 | C ₄₇₅ | 0.01 μ F 50V " |
| 1-121-106-05 | C ₂₄₃ | 5 μ F 6WV Electrolytic | -118-11 | C ₄₇₇ | 10 μ F 12WV Electrolytic |
| 1-101-046-01 | C ₂₄₄ | 2PF Ceramic | -118-11 | C ₅₀₁ | 10 μ F 12WV " |
| -649-01 | C ₂₄₅ | 12PF " | -118-11 | C ₅₀₂ | 10 μ F 12WV " |
| 1-121-106-05 | C ₂₄₆ | 5 μ F 6WV Electrolytic | 1-105-669-12 | C ₅₀₃ | 0.047 μ F 50WV Mylar |
| 1-101-046-01 | C ₂₄₇ | 0.01 μ F 50WV Ceramic | 1-121-115-05 | C ₅₀₄ | 100 μ F 6WV Electrolytic |
| -649-01 | C ₂₄₈ | 12PF " | 1-105-689-12 | C ₅₀₅ | 0.22 μ F 50WV " |
| 1-121-106-05 | C ₂₄₉ | 5 μ F 6WV Electrolytic | -721-12 | C ₅₀₆ | 0.047 μ F 100WV " |
| 1-101-004-01 | C ₂₅₀ | 0.01 μ F 50WV Ceramic | -681-12 | C ₅₀₇ | 0.047 μ F 50WV M |
| 1-121-135-05 | C ₂₅₁ | 50 μ F 6WV Electrolytic | 1-127-906-00 | C ₆₀₁ | 1 μ F 10WV Electrolytic (Alox) |
| 1-101-046-01 | C ₂₅₂ | 2PF Electrolytic | -907-00 | C ₆₀₂ | 3 μ F 6WV " " |
| -645-01 | C ₂₅₃ | 10PF " | 1-105-681-12 | C ₆₀₃ | 0.047 μ F 50WV Mylar |
| 1-121-121-01 | C ₂₅₄ | 200 μ F 12WV Electrolytic | 1-127-906-00 | C ₆₀₄ | 1 μ F 10WV Electrolytic (Alox) |
| 1-101-069-01 | C ₂₅₅ | 4PF Ceramic | 1-105-679-12 | C ₆₀₅ | 0.033 μ F 50WV Mylar |
| -627-01 | C ₂₅₆ | 6PF " | -673-12 | C ₆₀₆ | 0.01 μ F 50WV " |
| -424-01 | C ₂₅₇ | 500PF 25WV Ceramic | 1-127-906-00 | C ₆₀₇ | 1 μ F 10WV Electrolytic (Alox) |
| -058-01 | C ₂₅₈ | 0.05 μ F 50WV " | 1-105-685-12 | C ₆₀₈ | 0.01 μ F 50WV Mylar |
| -004-01 | C ₂₅₉ | 0.01 μ F 50WV " | 1-127-905-00 | C ₇₀₁ | 5 μ F 10WV Electrolytic (Alox) |
| -086-01 | C ₂₆₀ | 0.1 μ F 50WV " | 1-121-141-05 | C ₇₀₂ | 100 μ F 12WV Electrolytic |
| 1-121-116-05 | C ₂₆₁ | 1 μ F 12WV Electrolytic | -118-05 | C ₇₀₃ | 10 μ F 12WV " |
| 1-101-004-01 | C ₂₆₂ | 0.01 μ F 50WV Ceramic | -122-05 | C ₇₀₄ | 50 μ F 12WV " |
| 1-121-115-01 | C ₂₆₃ | 100 μ F 6WV Electrolytic | | | |

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| Part No. | Symbol | Description | Part No. | Symbol | Description |
|--------------|------------------|-------------------------------|--------------|------------------|--------------------------------|
| 1-121-161-05 | C ₇₀₅ | 500 μ F 6WV Electrolytic | 1-105-681-12 | C ₈₁₃ | 0.047 μ F 50WV Mylar |
| -122-05 | C ₇₀₆ | 50 μ F 12WV " | -679-12 | C ₈₁₄ | 0.033 μ F 50WV " |
| -164-05 | C ₇₀₇ | 10 μ F 12WV " | -675-12 | C ₈₁₅ | 0.015 μ F 50WV " |
| -136-05 | C ₇₀₈ | 2 μ F 50WV " | -679-12 | C ₈₁₆ | 0.033 μ F 50WV " |
| 1-105-637-00 | C ₇₀₉ | 0.2 μ F Mylar | -753-12 | C ₈₁₇ | 0.01 μ F 200WV " |
| -669-12 | C ₈₀₁ | 0.047 μ F 50WV Mylar | 1-109-010-11 | C ₉₀₁ | 200PF 500V Mica |
| -681-12 | C ₈₀₂ | 0.047 μ F 50WV " | -010-11 | C ₉₀₂ | 200PF 500V " |
| -685-12 | C ₈₀₄ | 0.1 μ F 50WV " | 1-121-245-11 | C ₉₀₃ | 1000 μ F 15WV Electrolytic |
| 1-105-122-11 | C ₈₀₅ | 0.055 μ F " | -245-11 | C ₉₀₄ | 1000 μ F 15WV " |
| -757-12 | C ₈₀₆ | 0.022 μ F 200WV " | -082-11 | C ₉₀₅ | 100 μ F 15WV " |
| -721-12 | C ₈₀₇ | 0.047 μ F 100WV " | 1-121-139-11 | C ₉₀₆ | 50 μ F 15WV " |
| 1-121-148-05 | C ₈₀₈ | 1 μ F 100WV Electrolytic | -003-11 | C ₉₀₇ | 4000 μ F 15WV " |
| 1-115-046-00 | C ₈₀₉ | 0.05 μ F 400WV Oil | -121-11 | C ₉₀₈ | 2000 μ F 12WV " |
| 1-121-220-11 | C ₈₁₀ | 200 μ F 12WV Electrolytic | | | |

Electrical Parts List (B)

| Part No. | Description | Q'ty | Part No. | Description | Q'ty |
|-------------------------|---|------|--------------------------------------|---------------------------------------|------|
| | A. General | | 1-525-039-00 -039-03 | High Voltage Rectifier 1DK1 HV1, 2, 3 | 3 |
| 1-538-110-03 | Video Signal Block | | | | |
| Printed Circuit Board | 1 | | | | |
| 1-506-108-00 | Connecting Pin | 2 | | | |
| 1-507-109-00 | Connecting Tip | 4 | | | |
| 1-515-024-11 | Relay | 1 | | | |
| | Deflection Block | | | | |
| 1-538-124-11 | Printed Circuit Board | 1 | | | |
| 1-506-108-00 | Connecting Pin | 7 | | | |
| 4-003-051-01 | Ceramic Spacer | 2 | | | |
| | Sound IF Block | | | | |
| 1-538-254-11 | Printed Circuit Board | 1 | | | |
| | High Voltage Block | | | | |
| 1-453-001-02 | High Voltage Block (Complete) | 1 | | | |
| | Deflection Yoke Block | | | | |
| 1-451-012-12 | Deflection Yoke (Complete) | 1 | | | |
| | Main Block | | | | |
| 1-502-068-02 -068-04 | Speaker | 1 | | PVC Wire | |
| 1-506-020-11 | 4 Pole Plug for Power Receptacle | 1 | Red | 12/0.18 1.5 ϕ in Diameter | 125 |
| 1-507-203-03 | Multi-Jack | 2 | Orange | " " " | 155 |
| 1-513-176-03 -176-13 | Power ON-OFF Switch | 1 | Yellow | " " " | 120 |
| 1-526-052-03 -052-04 | Picture Tube Socket | 1 | Green | " " " | 35 |
| 1-532-031-11 | Fuse | 1 | Blue | " " " | |
| X-40026-29-0 | Neon Lamp with Holder | 1 | Gray | " " " | |
| 1-514-081-11 | Micro Switch | 1 | White | " " " | |
| 4-002-713-01 | Micro Switch Actuator | 1 | Brown | " " " | |
| 1-531-103-02 -106-16 | Selenium Rectifier | 1 | Black | " " " | |
| 1-536-045-11 | Terminal Plate (2P) | 1 | Violet | " " " | |
| 1-514-138-11 | Push Button Switch for System Selection | 1 | Black | 20/0.18 2 ϕ | |
| 1-536-083-11 | Terminal Plate (1-4P) | 1 | Brown | " " " | |
| | Cabinet & Appearance Block | | Red | " " " | |
| 1-507-047-00 -065-11 | Double Jack | 1 | Gray | " " " | |
| | Antenna Jack | 1 | White | " " " | |
| | B. Tube | | Cables (Two Conductors) 7/0.12 Black | 335 | |
| 7311-510 | Picture Tube 140CB4 | 1 | " " 12/0.12 Gray | | |
| | | | Tinned Copper Wire 0.6 ϕ | 80 | |
| | | | " " " 1.0 ϕ | 100 | |
| | | | Spaghetti Yellow 1 ϕ | 35 | |
| | | | Braided Wire 16/14/0.02 | 160 | |
| | | | Coaxial Cable | | |

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| Part No. | Description | Q'ty | Part No. | Description | Q'ty |
|-----------------------|-----------------------------|------|--------------|-----------------------------|------|
| Y-44032-85-1 | Tuner Block Complete | 1 | X-40049-53-1 | Deflection Block Complete | 1 |
| X-40049-51-1 -52-1 | Video Signal Block Complete | 1 | 1-453-001-02 | High Voltage Block Complete | 1 |
| | SIF Block Complete | 1 | 1-451-012-11 | Deflection Yoke | 1 |

Mechanical Parts List

| Part No. | Description | Q'ty | Part No. | Description | Q'ty |
|---------------------------------------|-------------------------------------|------|--|--|------|
| A. General | | | | | |
| Cabinet & Appearance Block | | | 4-004-912-01 | Doubl'e Clamp for Capacitor | 1 |
| 4-002-603-03 | Cabinet Front | 1 | 4-002-800-02 | Heat Sink | 1 |
| -604-01 | Picture Tube Mask | 1 | 4-004-918-01 | SP Holding Bracket | 1 |
| -611-00 | Antenna Bushing | 1 | 4-002-646-01 | Earphone Jack Plate | 1 |
| -765-01 | Picture Tube Protector | 1 | -819-01 | SP Cushion Rubber | 1 |
| -781-00 | Rubber Band for Picture Tube | 1 | -806-03 | SP Holding Screw | 4 |
| -782-00 | Black Spacer (upper) for Tube Clamp | 1 | -647-00 | Multi-Jack Holding Bracket | 2 |
| -783-00 | Black Spacer (lower) for Tube Clamp | 1 | -785-00 | Fiber Washer for Video Signal Board | 1 |
| -784-00 | Deflection Ycke Spacer | 1 | X-40026-16-2 | 4 Pole Plug Mounting Bracket | 1 |
| X-40026-50-0 | Picture Tube Clamp Ass'y, including | 1 | 4-002-653-01 | Micro Switch Connecting Pin | 1 |
| 4-002-778-00 | Picture Tube Clamp | (1) | -674-00 | Spacer for Micro Switch | 1 |
| -779-00 | Tube Holding Bracket | (1) | 3-815-521-11 | Push Button " CCIR " | 1 |
| -780-00 | Earth Spring | (1) | -521-12 | " " " 625 " | 1 |
| X-40026-72-2 | Telescopic Antenna Ass'y, including | 1 | -521-13 | " " " B and F " | 1 |
| X-40026-71-2 | Telescopic Antenna | (1) | -521-14 | " " " 819 " | 1 |
| 4-002-715-00 | Antenna Washer | (1) | Video Signal Block | | |
| -716-00 | Antenna Holding Bracket | (1) | X-40026-66-0 | Shield Plate | 1 |
| -717-00 | Insulator Bushing | (1) | 4-002-680-01 | Deflection Block | |
| -718-00 | Antenna Lug | (1) | -681-01 | Heat Sink for Hor. Power Transistor (A) | 1 |
| -727-00 | Antenna Holding Nut | (1) | -682-03 | " (B) | 1 |
| -728-00 | Antenna Holding Lock Nut | (1) | -682-02 | Heat Sink for Vert. Power Transistor (A) | 1 |
| -764-00 | Antenna Tip (Red Ball) | (1) | -683-01 | " (B) | 1 |
| X-40049-02-1 | Cabinet Back | 1 | -684-00 | Mylar Insulator for Vert. Power | |
| -904-01 | Insulating Fiber | 1 | Transistor | 1 | |
| -905-01 | Specification Label | 1 | Bakelite Washer for Heat Sink | 2 | |
| 4-002-847-02 | Telescopic Antenna Clamper | 1 | Black Sheet on Deflection Circuit Board | 1 | |
| X-40026-05-0 | Carrying Handle | 1 | Ceramic Washer | 2 | |
| X-40026-06-2 | Table Stand Ass'y, including | 1 | Accessories and Packing Materials | | |
| 4-002-623-02 | Table Stand | (1) | Carrying Bag | 1 | |
| -791-00 | Table Stand Holding Bracket (Right) | (1) | Carton Box for Carrying Bag | 1 | |
| -790-00 | " (Left) | (1) | Master Carton for Two Sets | 1/2 | |
| -788-00 | Table Stand Cushion | (1) | Styro-Foam Cushion | | |
| -789-01 | Table Stand Holding Screw | (2) | (Outside of Carrying Case) | 2 | |
| -732-02 | Friction Spring for Table Stand | (2) | (Front Inside of Carrying Case) | 1 | |
| | Screw $\oplus R2 \times 6$ Black | (3) | (Back Inside of Carrying Case) | 1 | |
| | Nut 2.6φ for Table Stand Holding | | (Bottom Inside of Carrying Case) | 1 | |
| | Screw | (2) | Polyethylene Bag for Set | 1 | |
| 4-002-730-00 | Rubber Foot | 2 | " for Carrying Bag | 1 | |
| X-40049-01-1 | Channel Selector Knob | 1 | Instruction Manual | 1 | |
| X-40026-10-3 | Fine Tuning Knob | 1 | Caution Tag Assembly, including | 1 | |
| -11-0 | Volume Cntrl Knob | 1 | Inspection Sheet | (1) | |
| 4-002-762-00 | Vertical Hold Control Knob | 1 | Tag for the best reception (English) | (1) | |
| -635-00 | Control Knob | 3 | " (French) | (1) | |
| -761-00 | Control Panel | 1 | Caution Tag | 1 | |
| -742-00 | Badge " SONY " | 1 | Set Polishing Cloth | 1 | |
| | Main Block | | Accessory Case Assembly, including | 1 | |
| 4-004-906-01 | Chassis | 1 | Accessory Carton Box | (1) | |
| -909-01 | Heat Sink for Regulator | 1 | AC Power Cord (4P) | (1) | |
| -910-01 | SIF Board Holding Bracket | 1 | Extension Cord | (1) | |
| -911-01 | Adjustable Clamp for Capacitor | 1 | Spare Fuse 0.2 A | (2) | |
| | 4000μF | 1 | Earrhone | (1) | |
| | | | External Antenna Connector | 1 | |

—continued—

| Part No. | Description | Q'ty | Part No. | Description | Q'ty |
|--------------------------------|---|--|---|--|--|
| B. Screws & Washers | | | | | |
| Main Block | | | | | |
| 7-621-259-62 -261-32 | Screw ⊕P 2.6φ × 10 (for Earphone) ⊕P 3φ × 5 (for Multi-Jack (2), 4P Plug Mounting Bracket (3), High Voltage Block (1), Power Switch (2), Regulator Heat Sink (2), Adjustable Clamp (1), SIF Board (2), SIF Board Mounting Bracket (2)) ⊕P 3φ × 6 (for Power Transformer) ⊕K 3φ × 6 (for Power Transformer) ⊖R 3φ × 6 (for Tuner) ⊕P 3φ × 3 (for Lamp Holder) ⊕K 3φ × 5 (for 4 Pole Plug) ⊕P 3φ × 10 (for Adjustable Clamp) ⊕P 3φ × 14 (for Selenium Rectifier; ⊖F 3φ × 5 (for Picture Tube Mask) ⊕P 3φ × 8 (for 2P Lug (1), Transistor (2)) ⊕P 2.6φ × 6 (for System Selector Switch) ⊕P 3φ × 4 (for Adjustable Clamp) | 2 15 1 1 2 1 3 1 1 1 3 | 7-623-508-01 -255-52 -555-33 -261-32 -255-42 7-622-108-02 -105-02 7-623-408-01 -561-33 7-621-559-43 -261-36 -259-38 -561-53 -262-22 -268-42 -555-29 -259-39 -770-34 -555-33 7-623-210-22 | Solder Lug 3φ (for Transistor) PC Board Block Screw ⊕P 3φ × 8 (for Transistor (2), Video Board Mount (1)) ⊕P 2φ × 8 (for Transistor) ⊕K 2φ × 5 (for Deflection Circuit Board) ⊕P 3φ × 5 (for Video & Sound Signal Circuit Board) ⊕P 2φ × 6 (for Heat Sink) Nut 3φ (for Transistor) 2φ (for Transistor) Star Washer 3φ (for Transistor) Cabinet & Appearance Block Screw ⊕K 2.6φ × 6 (for Telescopic Antenna Clamp) ⊕K 3φ × 5 (for Telescopic Antenna Bushing (1), Telescopic Antenna Holding Bracket (1), Cabinet Front (4)) ⊕P 3φ × 5 (for Cabinet Back) ⊕P 2.6φ × 5 (for Cabinet Back) ⊕K3φ × 8 (for Picture Tube Clamp) ⊕P 3φ × 20 (for Picture Tube Clamp) ⊕P 4φ × 6 (for Grip Handle) ⊕K 2φ × 4 (for "SONY" Badge) ⊕P 2.6φ × 5 (for Table Stand Hold- ing Bracket) ⊕B 2.5φ × 5 (for Control Panel) ⊕K 2φ × 5 (for Control Panel) Spring Washer 4φ (for Grip Handle) | 1 3 4 3 1 2 4 1 1 1 1 6 3 3 2 1 2 2 1 1 4 1 1 2 |

SONY CORPORATION